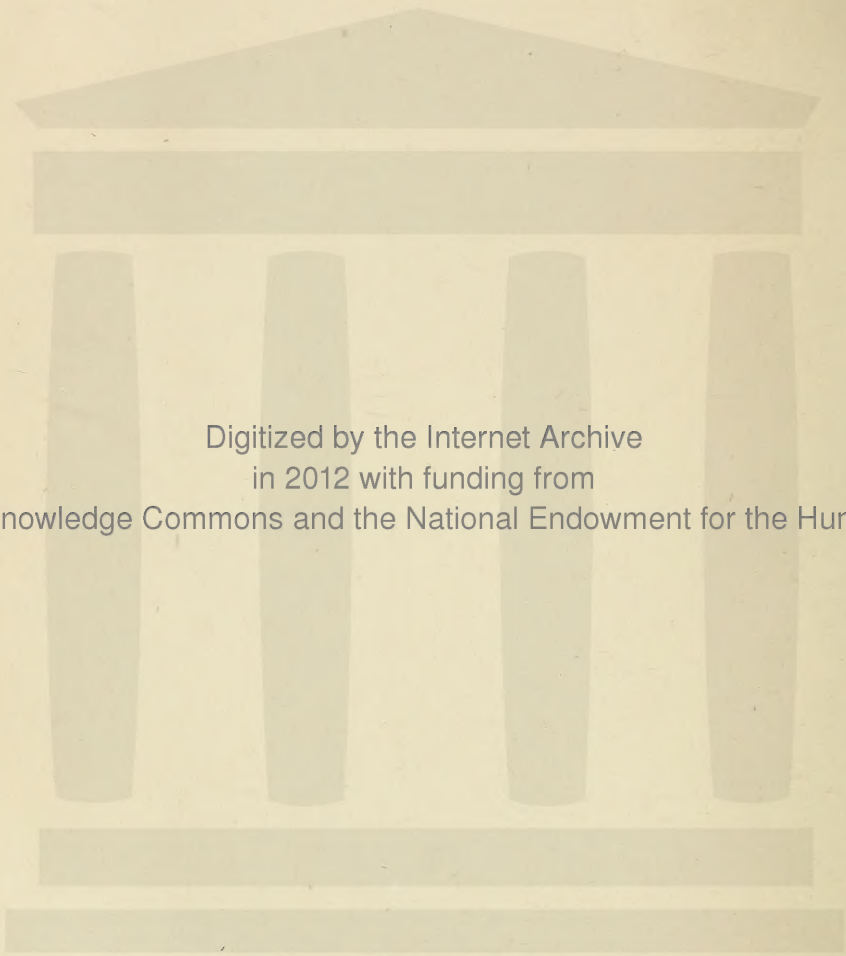

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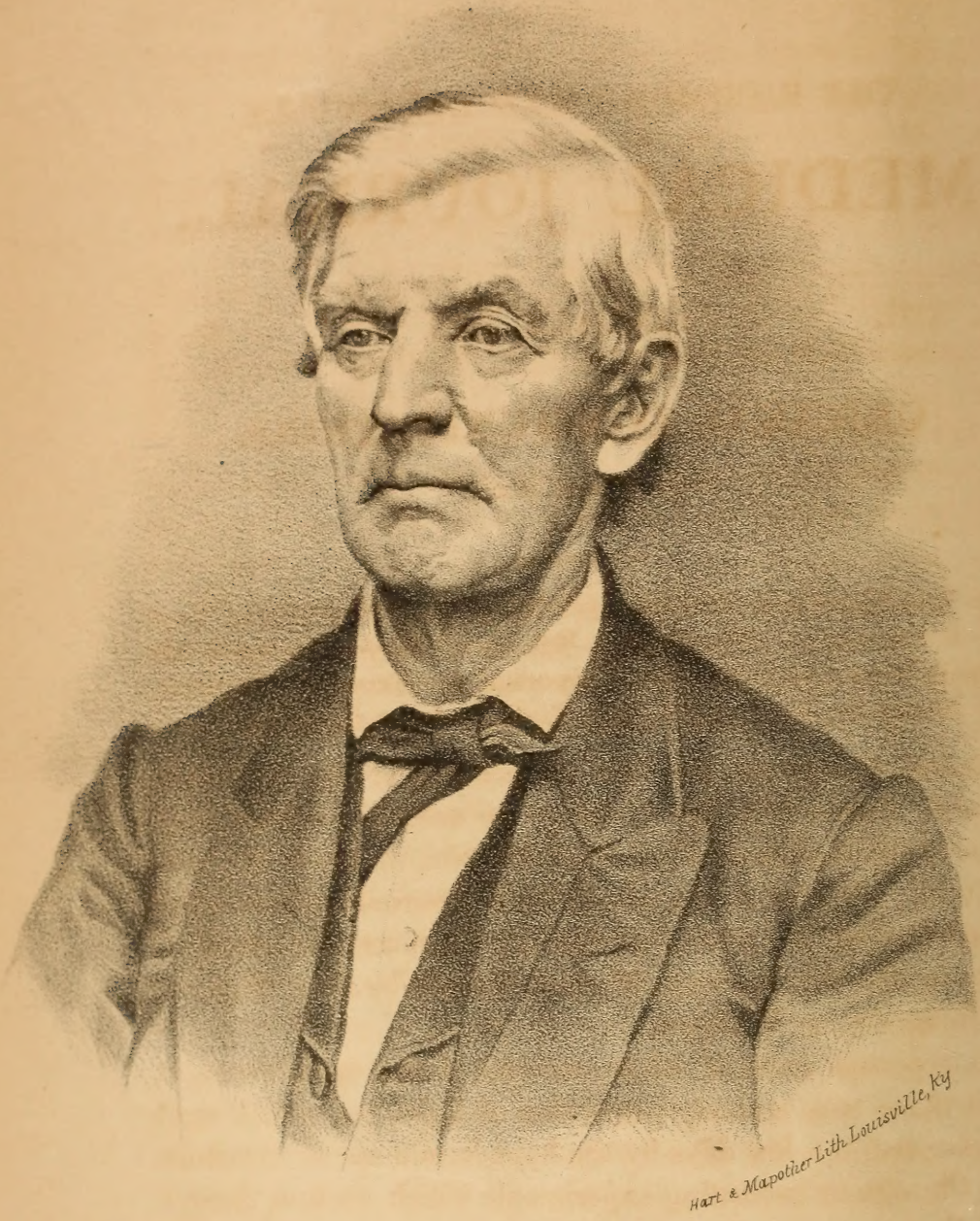

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THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. 1.—MARYLAND UNIVERSITY HOSPITAL. SERVICE OF Prof. J. J. CHISOLM. Stimulating Effects of Strychnia upon the Optic Nerve and Retina. Reported by THOS. H. SKINNER, of Nashville, Tenn., Resident Student at the Hospital.

Having charge of the Eye Department of the University Hospital, I have had the privilege of watching several cases of nerve blindness treated by Prof. Chisolm, in which the most wonderful effects from strychnia were observed; effects which seemed beyond the pale of probability when communicated recently to the Wurtemburg Medical Society by Prof. Nagel of the University of Tübingen.

He reported cases of white atrophy of the optic nerve, in which there was scarcely perception of light, yet useful sight was restored in a few days by the hypodermic use of strychnia. Prof. Chisolm is instituting experiments which confirm those of Prof. Nagel.

In our report we have purposely excluded a case of hemeralopia, in which the hypodermic use of strychnia speedily restored sight, when all other remedies had failed, and shall restrict our remarks to a case of amaurosis of long-standing. The patient had been led about for two years as a blind man,

seeing light from darknesss, but having only a very faint perception of large objects. After the fourth day's administration hypodermically of a solution of strychnia, his sight was so decidedly improved that he could walk out alone, visiting his home in the city of Baltimore, at the distance of a mile from the hospital, very much to the astonishment of his family, who only a few days previously had brought him to the hospital, as they supposed, a hopelessly dependent blind man.

Captain D. H. Y., aged sixty-two, was admitted into the University Hospital September 7, 1871, with the following history: In 1863 he was wounded in the right eye by a piece of glass from the bursting of a beer-bottle, the accident having left him with a cloud in the right cornea, and necessarily somewhat defective vision. The vision in the left eye in time became also defective.

The ophthalmoscope revealed choroidal disease, with whitish atrophic spots on the fundus of the eye.

His vision became so very cloudy in 1869 that an iredectomy was deemed advisable to stop the rapidly deteriorating vision. Both eyes were operated upon, but with no good result, as far as improvement to sight was concerned, so that in a few weeks all useful vision was lost, and the patient had to be led about, only seeing light from darkness.

When he entered the hospital his general health was good; his vision so indifferent that he could only distinguish shadows, and very faintly large objects when in his immediate proximity.

He was kept under observation for one week, until the 14th of September, when the hypodermic use of strychnia was commenced, one-fortieth of a grain morning and evening. He experienced good effects from the first administration. On the 17th, after using the one-fortieth of a grain for three days, as no disagreeable symptoms had shown themselves, Prof. Chisolm increased the quantity to one-thirtieth of a grain. By the fourth day of treatment the patient could conduct himself easily throughout the wards, and even ventured alone to pass through the crowded streets of the city to his home, one mile from the

hospital, which he succeeded in reaching in safety without asking the way, and much to the surprise of the family.

September 28th.—The strychnia in one-thirtieth-grain doses has been continued somewhat irregularly, averaging about three doses in four days. His vision has steadily continued to improve to such an extent that he can now read signs in the street, and can go from place to place with perfect independence.

These effects of strychnia from hypodermic use in this case are the more remarkable because, as Prof. Chisolm informs me, this patient had used freely the elixir of calisaya cum. ferro et strychnia one-sixtieth grain three times a day with no results whatever.

ART. II.—A CASE OF MEMBRANOUS CROUP SUCCESSFULLY TREATED BY THE INHALATION OF OXYGEN GAS. Reported at the Medico-Chirurgical Society of Louisville, Ky., by Frank C. WILSON, M. D., Visiting Physician to the Louisville City Hospital.

I was called April 6th, 1871, to see W. B., aged three years, and found that the night before he had been croupy, had complained some all day, and had taken syrup ipecac so as to produce vomiting several times. He was feverish, with a pulse at 132, and breathing very much obstructed both in inspiration and expiration. Ordered:

℞.—Pulv. Ipecac,
Pulv. Hydrag. Sulph. Flav., } aa grs. viij.

M. Ft. Cht. 4. S.—One at a dose when breathing is very much obstructed.

April 7th A. M.—Breathing became easier during the night, but this morning there is still great obstruction, both in inspiration and expiration. Respiration is rapid; pulse 130, and is still somewhat feverish. Temperature in rectum 101°. Vomited several times, and threw up some phlegm, but no distinct membrane. Ordered two grains of Dover's powder and two of bicarbonate of potash every four hours.

10 *A. M.*—Still great obstruction, both in inspiration and expiration.

1 *P. M.*—Is worse, and breathing with more difficulty, lips blue, face pale, and pulse rapid. Following the suggestion of Prof. Doughty, of Georgia, as to the solvent power of pepsin over the false membrane, I blew into the lungs, through a curved tube, finely pulverized saccharated pepsin (Scheffer's), and ordered it to be repeated every half hour.

3 *P. M.*—Breathes easier, blueness has disappeared from the lips, face has more color, and has coughed up a large quantity of tough, hard mucus.

5 *P. M.*—Cough is still croupy, but has shown more inclination to talk. The insufflation of pepsin to be repeated every fifteen minutes.

April 8th, A. M.—The inhalation of steam from an atomizer was kept up during the night, but could only be practiced while he was asleep. Lactic acid, twenty drops to one ounce of water, was also used with it several times, but produced so much irritation and coughing that it had to be omitted. He became somewhat easier after 1 o'clock, and rested better the remainder of the night. This morning the breathing is again labored. Ordered to continue the insufflation of pepsin, though it has produced some excoriation of the tongue and fauces.

12 *M.*—Dr. Seaton saw the patient with me; agreed in the diagnosis of membranous croup, and was of the opinion that, unless soon relieved, he could not live twenty-four hours. Upon consultation, it was agreed to push the Dover's powder a little further, giving a grain every two hours with half a grain of calomel; to refrain from producing emesis unless absolutely necessary, and give internally chlorate of potash freely. He has thus far coughed up a good deal of very tough mucus, but no well-pronounced membrane.

3 *P. M.*—Breathing more labored, and beginning to show blueness of lips, and eyes are sunken. Is well under the influence of the opium. It being evident that the child must soon die unless relief could be obtained by tracheotomy or some

other means, and the family not consenting to the operation, I concluded to try the inhalation of oxygen gas, which I had several times used with such marked relief in the cyanosed condition following a series of epileptic convulsions, and in the embarrassed respiration of asthma and emphysema, I procured twenty gallons, and administered it through a funnel, as I would chloroform. The relief afforded by it was most marked and gratifying, the labored breathing soon becoming almost natural, and the color of face and lips normal. The improvement was so evident that the inhalation was ordered to be continued throughout the night.

April 9th, A. M.—Seems much better this morning, though cough is still croupy, and breathing somewhat obstructed. About sixty gallons of the gas were consumed during the night. He has no fever, and seems more inclined to eat.

1 *P. M.*—Breathing a little more obstructed. Made more oxygen, and ordered it to be used whenever it seemed necessary.

10 *P. M.*—Breathing somewhat easier, but cough a good deal better, and is still croupy in character. Temperature 105°; pulse 110.

April 10th, A. M.—Coughed a good deal during the night, and it is still croupy in character. The oxygen was used only once during the night, for fifteen or twenty minutes, when respiration seemed more than usually embarrassed. Temperature 99½. There is slight dullness over the upper portion of the right lung, posteriorly and in axilla, but nothing more than an occasional mucous râle is heard on auscultation. Ordered,

℞.—Liq. Ammoniæ Acetatis,
Syr. Pruni. Virginiensi,
Tr. Opii. Camph. } aa ℥ ss.
Syr. Tolu.,
Syr. Scillae,

M. Ft. Mist. Sig. A teaspoonful every two hours.

Directed the Dover's powders to be given every four instead of every two hours.

7 *A. M.*—An hour ago he became worse, breathing much obstructed, moaning respiration, and is hot and feverish. Tempe-

rature 104½. Ordered jacket poultice, and added three grains of the acetate of potash to each dose of the expectorant mixture.

April 11*th*.—Has no fever this morning, though cough is still croupy, and there is some obstruction. Very little air is heard to enter the upper lobe of right lung, and sonorous and sibilant râles are heard. Slight dullness can be detected on careful percussion. In all probability the formation of membrane has extended along the bronchi leading to that portion of the lung.

8 P. M.—Had some fever this afternoon, and cough still troublesome and croupy. Has no fever now, and skin is moist. Very little air enters the right lung. Continue the poultice and cough mixture, and ordered two grains of quinine three times a day. To-day he coughed up a quantity of tough membrane, which, under the microscope displayed a mass of imperfectly formed cells, with a few fully formed ones entangled among interlacing filaments of coagulated fibrine. His mother reports that he passed from his bowels a long piece of membrane, which she described as being one and a half or two inches long, and three-fourths of an inch broad, but she threw it away.

April 12 *A. M.*—No fever, but cough still croupy and troublesome.

7 *P. M.*—Was comfortable all day until about an hour ago, when he became more fretful and feverish, and breathing more labored.

Temperature 103, respiration 52; pulse 138. There is still slight dullness over upper portion of the right lung, and sonorous and sibilant râles are heard as the air enters it with difficulty. No pneumonia can be discovered. Ordered the poultices to be kept up, the quinine to be continued, and the expectorant mixture to be given more frequently.

April 13*th*, 9 *A. M.*—No fever, and slept well during the night. Air enters the right lung more freely, though there is still some obstruction.

7 *P. M.*—The fever returned again this evening about an

hour ago. Temperature 102½, respiration 50; pulse 144. Ordered a dose of four grains of quinine to be taken at 2 P. M. to-morrow.

April 14th.—This morning is very hoarse, and breathing is more labored. Nothing more can be discovered in the lungs, and temperature is only 99. Bowels not moved since yesterday; discontinued the Dover's powder, but no other change made in the treatment.

7 *P. M.*—Had some fever this afternoon, though temperature is now 99½. Respiration 45, and pulse 150. His breathing is not so labored, though he is still hoarse, and complains of his throat being sore. Ordered Fougera's Nutritive Syrup of Iron.

April 15th, 8 *A. M.*—Is better, slept well, bowels moved freely, is brighter, and has taken some food. Breathing more freely, and cough is looser.

7 *P. M.*—Sitting up, has no fever, breathing freely, though still a little hoarse. Appetite has returned, and bowels are moved regularly.

April 20th.—Discharged about well.

Remarks.—The treatment first adopted in this case was the one commonly given—viz., emetics, with sufficient opium to quiet the spasmodic action. The child, however, continued to grow worse, and the local application of pepsin, suggested in this Journal as a solvent for pseudo-membrane by Professor Doughty, of Georgia, in 1869, was tried. Instead, however, of using the solution in the form of spray, I employed a preparation made by Mr. Scheffer, of this city, the saccharated pepsin, blowing it into the larynx through a curved tube. Its immediate effect was gratifying, large quantities of softened mucus being expectorated with great amelioration of the symptoms. It was found, however, that from its careless application excoriations of the mucous membrane of tongue and fauces were produced, so that its use had to be suspended after two days. Opium was then pushed to full narcotism, but the symptoms still grew worse, the cya-

nosis becoming alarming, and tracheotomy was suggested, but the consent of the parents could not be obtained. The indication clearly being to supply oxygen, I procured from Mr. D. B. Grable, druggist, a supply of the pure gas, and administered it in as undiluted form as possible. The relief afforded by it was immediate and marked, so much so that its administration was ordered to be continued at intervals, as needed, and it was relied upon to prevent asphyxiation until the membrane could be detached and thrown off. This occurred on the sixth day, and though afterwards, by the extension of the membrane into a portion of the lung, the breathing was embarrassed, it only became at intervals so much obstructed as to require the administration of the gas.

At no time did the physical signs indicate the presence of pneumonia. There was slight dullness on percussion, with sonorous and sibilant râles, as if from a diminution in the calibre of the bronchial tubes. Instead of taking the usual course of pneumonia, these signs lasted three or four days, and then disappeared, after which the case convalesced rapidly.

Although oxygen was used as a remedy as early as 1783 by Caillens, and again in 1789 by Beddoes, who sought to introduce it as applicable to a large variety of diseases, it failed to come into general use. As suggested by Dr. Smith, of New York, this was probably owing to the difficulty experienced in making the gas pure, and the want of conveniences for its administration, caoutchouc being then unknown.

Dr. Birch, in 1857, published a work on oxygen, detailing numerous cases treated by it, and concluded that "there existed probably no remedy at all comparable to oxygen as a purifier of the blood," and "his own experience pointed to its well marked and energetic action upon the general capillary circulation and upon the skin."

Again in Braithwaite's retrospect, pt. 41, Dr. Birch maintains "that oxygen acts in two ways, first, by its alterative and tonic influence on the nervous system, and second, by the augmented activity of the normal chemical changes in the animal organism directly induced by its inhalation."

Dr. Andrew H. Smith, of New York, in an article upon oxygen gas as a remedy in disease, published in 1870, after detailing the history and modes of preparation and administration, cites a number of experiments made with a view of determining its physiological action. He disbelieves "the theory of hyperoxygenation as the term is generally understood," and shows "that the fatal results as heretofore observed as well as the *post mortem* appearances are the effects of the products of respiration with the gas inhaled."

He believes that "it is contrary to the economy of Nature that the blood should have the power of absorbing more oxygen than Nature can supply," and that "if pure oxygen be taken into the lungs, only as much will be absorbed by the blood as would be taken up from the air under circumstances involving the greatest possible physiological demand for oxygen." He concludes that "his experiments, while they coïncide with the generally received opinion as to the increased activity in the retrograde metamorphosis as resulting from the use of oxygen, show nevertheless that the increase is confined within narrow limits, and that saturation of the blood corpuscles being quickly attained, is a strictly physiological condition and in no way necessitates the setting up of any morbid action within the system."

All the experiments cited were made under circumstances where the respiration was unobstructed, in order to determine the effect of oxygen when inhaled while respiration was embarrassed and to ascertain whether, under the pressing demand for oxygen in impending suffocation, a larger proportion of the gas would not be absorbed by the blood from the lungs partially inflated by the pure gas, than from the same amount of atmospheric air, or in other words whether, in the lungs partially inflated with oxygen, the same amount would not be absorbed by the blood as would be taken up when the lungs were fully inflated with atmospheric air.

Experiment I.—A rubber ring was placed round the neck of a mouse so tight as greatly to obstruct the breathing. When suffocation seemed imminent he was immersed in an atmospere of

oxygen which in a short time revived him, and he seemed to breathe with comparative ease. This was repeated several times with the same result.

Experiment II.—Made upon myself. The mouth being closed respiration was carried on through the nose partially obstructed, so that after several minutes the sense of impending suffocation became very distressing. Pure oxygen was then substituted for the atmospheric air, and breathed through the same opening, with almost complete relief from distress. This experiment was also repeated several times by myself and Mr. Grable, the druggist, each time with a like result.

In membranous croup the air passages become more and more obstructed so that the amount of oxygen inhaled, as atmospheric air, is less than the system demands for the proper performance of its functions and a sense of impending suffocation results. If under these circumstances pure oxygen be substituted for the air, a larger amount thus enters the lungs, and, under the pressing necessity, a sufficient quantity is absorbed to satisfy the demands of the system and relieve the distressing symptoms.

In these cases there are two factors which tend to destroy life. First, the want of oxygen, and second, the retention of carbonic in the system. The supply of pure oxygen instead of atmospheric air corrects the first, and though it does not eliminate the second, yet by its stimulating effect it enables the system to resist longer the poisonous influence of the carbonic acid.

There is certainly no hyper-oxygenation, the aim being simply to maintain the supply of oxygen in the blood at the healthy standard, so as to sustain life until Nature can effect a separation of the membrane.

ART. III.—A REPORT OF A CASE OF HÆMORRHAGIC INTERMITTING FEVER. By A. G. MABRY, M. D., Selma, Alabama.

Mr. A. H., aged about fifty-five years, had suffered from occasional attacks of intermitting fever for the past two years, which

had considerably inpaired his general health, though he was still able to labor on the farm. He had a paroxysm on Monday, August 30th, another on Tuesday, and the third on Wednesday. During third chill he commenced discharging from the bladder, in profuse quantities, a bright claret colored fluid without sediment, and at the same time the skin and conjunctivæ became intensely yellow. He took quinine on each of these days, and escaped the paroxysm on Thursday.

I visited him for the first time in this attack at 4 o'clock on Thursday. The conjunctivæ were then intensely yellow, but the skin had to some extent lost its brightness, and had assumed a dingy yellow hue; his features were shrunken; the expression of his countenance was haggard and indifferent; his lips were blanched; his tongue was large, flaccid, pale, rather cool and partially covered with a dark brown fur. The temperature of the skin was rather above the healthy point; it was what might be considered a moderate fever heat, and the warmth was uniformly deffused over the surface. The pulse in frequency was about one hundred to the minute. It was of sufficient volume, and had some force, but very compressible. Sounds of the heart were normal, but, (the organ), apparently impinged against parietes of the chest with subdued force. The stomach was irritable, and at irregular intervals ejected a very deep green flaky fluid. The bowels had been acted upon by calomel before I saw the case and some of this same character of fluid discharged.

The patient's mind was clear, but he was depressed in spirits. I made my second visit on Friday morning, and found the patient very much as he was the evening before, except that the claret colored fluid which he had discharged form the bladder, (sometimes as much as a quart at a time), every two or three hours since Wednesday, ceased to flow this morning at 3 o'clock, and there seems to be nothing whatever contained in the bladder,and he is more listless and inclined to be drowsy.

My third and last visit was made on Saturday morning, and up to that time there had been no renewal of the discharge from

the bladder, and apparently no deposit of any kind had been received into that receptacle, and of course total inaction of the kidneys was the unavoidable inference.

Last night the yellow tinge began to fade away, and there is now very little discoloration visible, and the patient is to a considerable extent comatose. Up to last night there had been no muscular tremors or other involuntary movements, but since that time he has continued to jerk first one arm and shoulder, and then the other, and the same character of movements follow each other in the lower extremities.

These symptoms show tnat the cerebro-spinal system which had previously apparently been unaffected, had now become deeply implicated, and their simultaneous appearance with the disappearance of the yellow tinge of the skin, and the cessation of the discharges from the bladder has added strength to the opinion which I have long entertained that these yellow deposits in the derma and other tissues are the result of vicarious secretory action separating the materials of the bile from the mass of the circulation, which are thereby, in some mysterious way, rendered innoxious. As corroborative of this view of the subject I will, in a very brief way, mention a case which was detailed to me by a gentleman of extensive experience and great ability as a practitioner. A lady sometime after confinement ceased to urinate, and for many weeks not a drop of urine passed *per via naturalis.*

After having undergone active treatment for nephritis she applied to my friend for advice. The lady was pale, and evidently out of health, but manifested no very grave symptoms, such as might have been expected. The skin had the appearance of being unusually relaxed, and was uncommonly perspirable.

He examined the perspiration and found that it emitted a strong urinous odor, and the same odor was emitted by the mammary secretion. He at once came to the conclusion that the kidneys having ceased to perform their functions, the skin and mammary glands had undertaken to compensate for this in-

action by assuming a vicarious action. This view of the case induced him to prescribe active diuretics, tonics, and a nutritious diet, and under this treatment the kidneys promptly resumed the performance of their appropriate functions, and the patient's health was soon restored. Some months afterwards, however, she was unexpectedly exposed to sudden change in the weather, which brought on precisely a similar attack, which promptly yielded to the same course of treatment. In this case there was total inaction of the renal organs for many weeks without the slightest appearance of uræmic poisoning.

Can it be doubted that but for the compensating effect of this vicarious action of the skin and mammary glands that the patient would have succumbed under the influence of retained poisonous excretions, and may we not reasonably conclude that this vicarious action of the skin and other tissues and organs in these cases of hæmorrhagic intermitting fever is depurative in its effect. The symptoms detailed as being present in this case indicate the pathological condition of the organs and tissues of the body in this particular form of disease, which doubtless differs much in different cases, but they are silent in regard to the etiology of the disease which in truth is but the etiology of intermitting fever. It is contended by some that the liver cannot be inactive in these cases inasmuch as large quantities of bilious matter are discharged from the stomach and bowels. But in my view of the subject these discharges cannot be relied upon as affording proof of the active condition of the liver. This bilious matter is discharged through the pores of the skin, it is found mingled with the salivary and lachrymal secretions, and I believe is also secreted by the alimentary mucous membrane. These sources are sufficient to account for its appearance without presuming the liver to be preternaturally active. A portion of the fluid discharged from the bladder of this patient was analysed by Dr. Michel, and a desire to show the connection between the symptoms and the result of the analysis, induced me to submit this description of the case for the consideration of the Association.

Dr. Michel found in the specimen, bile, albumen, cystine, blood, and urine, so this really was a hæmorrhage; sanguineous fluid being mixed with the natural secretions of the kidneys and other principles indicating congestion and vicarious action of these organs. It would be useless to mention the course of treatment adopted in this case, as nothing that was prescribed seemed to have any beneficial effect. The patient died at 3 o'clock on Sunday morning. I will take occasion here to repeat what I have heretofore stated that it is a mistake to suppose that this is a new form of disease. More than twenty-five years ago I treated, in the vicinity of Selma, cases of intermitting fever, presenting in a marked degree all the symptoms characteristic of these cases of the present time.

I deem it proper to state that this case occurred five miles south of Selma, in the pine woods.

This description answers very well for all the graver cases met with here; except that in the generality there is less heat of surface; sometimes far less, the skin being cold and bathed in a profuse perspiration. The circulation too, is generally more languid than it seemed to be in this case.

There can be no doubt about the presence of blood corpuscles in the urinary dischage of this patient; they were plainly visible, but in comparison to the entire mass they constituted a very inconsiderable part. This is very generally the case, but not always however, for we do occasionally encounter cases in which the loss of blood from this source, or from the nose, stomach or bowels, is profuse, and so free from the admixture of other matthat it coagulates in the vessel into which it is received, which does not occur with this particular character of fluid discharged from the bladder.

Whatever it may be besides blood that so characteristically distinguishes this peculiar discharge; whether "brokendown" "blood" "corpuscles," "bile," "purpurine," "albumen," or all these together, it is certainly effete matter, the speedy removal of which is required by the well-being of the economy, and I consider the process concerned in its separation and discharge

one of elimination, which well considered principles of treatment would always encourage. Upon this point so far as I am acquainted with the views of others, I admit that I have not the concurrence of the Profession generally, for I think I may safely venture the assertion that the appearance of this "*bloody urine*" is viewed with alarm almost always both by physician and patient, as being serious in itself, or as indicating serious morbid changes. But I am quite sure that every experienced practitioner has frequently met well-marked cases of this variety of intermittent, the general aspect of which is not sufficiently grave to produce any alarm whatever, and which yield as readily to treatment as do cases of the most simple form of the disease.

Why it is that this effete matter should manifest itself so much more conspicuonsly in some cases of intermittent than it does in others it may be impossible to explain. It has been supposed attributable to increased intensity of malarious influence, but observation has induced me to conclude that the explanation is more likely to be found in some peculiarity in the condition of the system itself. We not unfrequently find cases occurring where we would least expect to find them if they were dependent upon increased intensity of malarious influence, and on the other hand we fail to find them where we most reasonably expect to meet them. The danger in these cases depends directly upon the extent of the *congestion* that may be present and not upon the discoloration of skin and conjunctivæ, and the presence of "*bloody urine.*"

A practitioner of considerable experience made this remark to me, "some of these cases will get well and some will not." It is the cases that are attended by overpowering congestion that "*will not get well,*" and the rest will, when promptly and efficiently treated. This case, however, is apparently an exception to this rule, as it presented no evidence of congestion, or any considerable inturruption to the circulation, and yet it resulted fatally. Death being produced by the arrest of secretory functions, and the retention in the system of poisonous effete matter. Though it is not generally known, yet it is well understood by

many practitioners that quinine will often produce "bloody urine," and hence in these cases it is too often withheld altogether or given with too much reserve. Being aware of this fact and participating in the timidity which its knowlege has produced, I was induced at my first visit to discontinue the use of the quinine after the patient had taken it for the three preceding days, and the result was a total and continued suspension of all renal secretion and simultaneous appearance of symptoms of uræmic poisoning. Subsequent experience has convinced me that this was an error in the treatment. Had the use of quinine been continued I now feel assured that elimination would have continued, and the cerobro-spinal nerve centres have escaped the deadly influence of this poisonous effete matter.

It is unnecessary to indulge in speculation in regard to the manner in which quinine acts in producing "bloody urine," or in inducing healthy eliminative action, and I will only venture to suggest that in restoring a due degree of healthy innervation to the various organs and tissues of the body, the kidneys participating in this influence are thereby induced to respond to the necessities of the system, and to perform their functions with increased energy. Experience is demonstrating the correctness of these views in a decided manner. What was sometime ago styled the "*new disease*" is understood by many of our most successful practitioners to be nothing more than a modified form of intermitting fever, requiring the same course of treatment with such variations as are necessary to adapt it to the peculiarities of each case. And hence it is found that the judicious use of mercurial purgatives, morphine, or other anodyne, stimulants, as they are found to be necessary, and above all quinine in quantity sufficient to prevent the recurrence of the paroxysm will be successful in a large majority of cases. Blisters, rubefacients, and warm application will often be useful, and it is my custom to prescribe saline diuretics. This form of intermittent is still, to some extent, prevalent, but is much less frequently met with than it was two years ago. I have very recently

treated a well marked case. This patient the little daughter of intelligent parents, at first presented no very prominent symptom that attracted serious attention, and I was not called to her until she had entered the hot stage of the third paroxysm. Reaction was rather imperfect, but I prescribed, immediately, calomel, ipecac, extract hyoscyami, and nit. potash, together, in divided doses, at intervals of two hours, and in the intermission the free use of quinine, and the occasional use of a little whisky toddy. Under this treatment recovery was promptly established, and the yellow tinge faded away, and the claret color gradually disappeared from the urine as convalescence progressed, leaving no discoverable trace of disease behind.

ART. IV.—SOME REMARKS ON COTTON ROOT (GOSSYPIUM HERBACEUM). By ROBERT E. PEYTON, M. D., Fauquier, Va.

For some time I have been intending to send you my experience of cotton root, as it is a medicine of no mean value, and seems to be little known in these parts. My attention was called to it before the late war by sundry articles in "Tilden's Journal of Materia Medica," published in New Lebanon, N. Y., and "edited by James Bates, M. D., and H. A. Tilden." In that Journal it is highly commended for its emmenagogue and parturient powers, and its efficiency in dysmenorrhœa. It is considered equal to ergot as a parturient, and much safer in consequence of not acting with so much violence, and being imbued with decided anodyne and sedative powers. It has been much used by the negro women of the cotton States for purposes of abortion; and is said to produce that effect with but little danger.

I have not used it as a parturient, but can testify to its efficiency in menstrual suppression, and in dysmenorrhœa. In 1860 I was called to a young woman who had been suffering for a year or more with the evil effects of suppression, brought on by getting wet. I tried several of the most efficient emmen-

agogues without effect, and then gave Tilden's fluid extract of cotton root, in tablespoonful doses, four times a day, with complete success.

In February, 1870, was called to a colored woman about thirty years old, who had been subject during her whole menstrual life to dysmenorrhœa, accompanied for some years past with violent nervous symptoms, and had been treated by several physicians with but little good effect. She had a child some five or six years old, but was then unmarried. Her case was as follows: General health good, an industrious and capable servant during her menstrual intervals, and polite and obliging to her mistress; but for several days previous to the eruption of her menses she became excitable, impatient, and rude and impudent in her behavior to master and mistress; and after the menses commenced to flow, she suffered for a week or ten days with most violent symptoms of a tetanoid character. Every attempt at motion, or at being raised from the bed for any purpose, brought on the most violent spasms, with perfect rigidity from her head to her feet, accompanied with some degree of opisthotonos. This was the condition in which I found her. Her mistress told me that morphine had been tried upon her in vain, and that it always increased her nervous excitement.

As her bowels were somewhat confined I gave her a purgative pill of calomel, aloes and jalap, and ordered after its operation the fluid extract of cotton root, to be administered in doses of a tablespoonful, with a little water, four times in twenty-four hours. Her mistress thought this attack was moderated by the prescription. I then left a bottle of the extract, with orders that it should be given in tablespoonful doses three times a day, commencing one week before the next menstrual period; and after the attack of spasm came on, that it should be given four or five times a day, according to symptoms and effect, until the attack wore off; and that the same practice should be continued before and during each menstrual period until further orders.

The next period was very much modified by this prescription;

the second more so; and at the third there was nothing more than a little nervous excitement. I then advised the woman and the mistress to keep up this precautionary treatment with the extract for two or three years; so that her nervous system might have an opportunity of becoming entirely unaccustomed to the diseased action.

This advice was followed for four or five months and then neglected, and in two or three months thereafter the attacks returned, but were again arrested by the extract.

W. I. C., who was far gone with consumption, was advised by a friend to take McMunn's elixir of opium. After taking it for several weeks, the effects were so unsatisfactory that he left it off. This was followed by distressing nervous symptoms, attended with a suffocative cough, and apprehension of immediate dissolution. The messenger sent for me to see the case, said the man was dying, and so all his friends seemed to think when I arrived at his house. I soon found that the alarming symptoms were from nervousness, and not wishing to continue opiates in the case, I first gave him a teaspoonful of the fluid extract of cotton root. This was followed with much relief, and a few repetitions gave him a comfortable night. As long as it was used in the case it acted well, but not having much on hand, chloral was substituted with good effect.

The remarkable fact about this substance is, that it seems to have been so little known as a medicine. Soon after the late war I inquired for it at the most extensive and popular druggists' establishments in Washington and Alexandria, but they knew nothing about it. I have spoken of it to numbers of physycians, but have yet to meet the first one who had ever heard of its medicinal qualities. I have examined all the treatises on materia medica and therapeutics that I could lay my hands on, and I have found it mentioned in none of them. Nor have I seen it named in any other Journal than Tilden's, save that it was once casually mentioned in one of your excerpts.

The only mention of it besides by any author that I have seen, is in Dunglison's Medical Dictionary. All he says of it is,

"The seeds of the cotton tree, gossypium arboraceum, have been administered in coughs on account of the mucilage they contain. The cotton wood is used in medicine in making moxas."

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—HISTORY AND STATISTICS OF THE OPERATION OF TRANSFUSION OF BLOOD. By W. B. DRINKARD, M. D., M. R. C. S., Demonstrator of Anatomy, National Medical College; one of the Surgeons to the Children's Hospital. [Read before the Medical Society of the District of Columbia.]

Without pretension to giving to the subject the space to which its importance entitles it, the following résumé only aims at calling attention to a somewhat neglected point of operative surgery, which, for its simplicity of application, the brilliancy of its results, and the comparative oblivion which has enshrouded it of late years, has, perhaps, no parallel in the list of surgical remedies.

As a result of that fitful caprice which seems to sway the medical mind, as all others, some points of doctrine, therapeutic agents or surgical appliances, greeted with applause and with flattering satisfaction on their first appearance, reign for a while by their right of vogue, and then gradually lapse into disuse, disfavor or forgetfulness, as the varnish of their newness wears away. Others, again, born and reborn, as it were, in difficult travail, acknowledged, legitimized, holding a place conquered by painstaking research and elaborate clinical investigation, seem fated always to stand among the "novelties," and to bear continually, despite their venerable titles, the odium that has attached itself to the youth of most really useful or striking discoveries. Among the latter must be counted the operation of the "transfusion of blood," a procedure antecedent, in its hypothetical geneaology, even to circumcision.

A short review of its historical record will serve to explain its varying fortunes, and may, it is hoped, awaken interest in the further practical prosecution of the subject in its relations to the physiology and pathology of the present day.

A passing allusion to the transfusion of blood, in a verse of Ovid,* has served as a text for the belief that this operation was known, or even practised in the Augustan era; however founded this idea may be, it is necessary to pass over the medical records of remote antiquity, and to reach an epoch more nearly contemporaneous with our own, to find what has been accepted as the first example of the procedure, practiced as an operation on a human patient. No less illustrious a subject than the Pope Innocent VIII., has been credited with the honor of being the first recipient of foreign blood through surgical intervention. His Holiness was in April, 1492, dying of what a certain grim humor has called "that terrible disease—extreme old age." A daring Jewish innovator, whose name has, unfortunately, not come down to us with the memory of his deed, proposed to find the Pontiff a "fountain of jouvence" in the blood of three youths, who died martyrs to their own devotion and the practitioner's zeal, and without perceptibly lengthening the patient's existence. This statement we owe to Sismondi,† who draws his authority for it from Reynaldus.‡ An examination of the original passage, however, would seem to show that the quotation is a mistranslation, and the treatment adopted was medical rather than surgical; a chemical compound formed from the blood used having been ingested, and not, properly speaking, transfused. But even though the criticism be just, and while it thus divests the early history of transfusion of its most striking episode, it is certain that the unfortunate issue of this case exercised a repressing influence upon the progress of the idea, and retarded its development many years. In 1615, we find a de-

* Ovid, Metamorph. Lib. VIII, v. 33, 4.

† Sismondi, "Histoire des Republique Italiennes du Moyen Age," Paris, 1815.

‡ Reynaldus, "Annales Ecclesiastici," 1733, quoted by V. Belina.

scription of the operation in Libavius,* but it is not until the middle of the 17th century that the real surgical history of transfusion commences.

It would appear that the new impulse given to physiological and pathological studies, in the return from the old Galenistic doctrines by the promulgation of Harvey's researches and their results, led to the new and more successful attempts to rehabilitate this operation. In 1664 we find Wren in England, and Major in Germany, proving the possibility of successful transfusion in animals; and in 1666 Denis and Emmerets, in France, were fortunate enough to establish the practicability and utility of the operation in man. The results of Denis's experiments are consigned in a "letter written to M. de Montmor, Counsellor of the King in his Councils, etc., by J. Denis, Doctor in Medicine, Professor of Physiology and Mathematics," 1667. Denis's first trial was made on a youth of seventeen years, suffering from fever, and debilitated by frequent venæsection: ℥iii of lamb's blood were injected into his veins, with an entire and almost immediate success. The second essay was one rather of curiosity than necessity; the patient, a stout man, aged forty-five, received an injection of lamb's blood, as in the preceding case, without experiencing any disturbance in the prosecution of his ordinary vocation. Denis repeated these experiments on animals with a like result.

At this point one would have thought the operation established on a firm basis, but veteran doctrines, religious prejudices, and metaphysical sophistications mingled themselves with the discussions that ensued upon the promulgation of Denis's letter, until to appease the storm that raged between the two opposed scientfic camps, a decree of the Parliament of Paris,† in 1668,

* Libavius, "Appendix Necessaria Syntagmatis Arcanorum Chimicorum," 1615.

† The immediate cause of this edict was the crimination (and criminal litigation) following upon a case in which Denis commenced the transfusion, but was prevented from completing it. The patient, a man, died very shortly, under circumstances tending strongly to fix suspicion upon his wife as his poisoner. The evidence exonerated Denis, but the event itself proscribed the operation pro tempore.

virtually suppressed the operation in France. In 1667, however, Lower and King, in England, had repeated the operation on man, with success.* An account of a German case, also that of Dr. John Daniel, who successfully transfused from three to four ounces of blood into a debilitated man in 1667,† if perfectly authentic, would dispute priority with Denis's first case. In 1668 Riva and Manfredi‡ put the operation into practice in Italy.

Now become one of the properties of surgery, the operation again underwent a vicissitude of scientific favor, and lapsed once more into neglect, remaining a dead letter until our own day. Blundell, in his "Physiological and Pathological Researches," published in 1824, brought transfusion again to the notice of the Profession, and once more demonstrated the practicability of its application. It is to this publication, and to the article in his "Obstetricity,"§ that is due the prominence ever since assigned, in text-books, to this operation as a restorative means after puerperal hæmorrhage. And yet, despite the complete, if somewhat tardy acknowledgement of the claims of transfusion thus obtained by Blundell, its progress into public favor and practice was still slow. The accumulated statistics, however, of the quarter of a century following Blundell's publications, enable us to bring together a very respectable number of cases, enough already to give material for a fair criticism of the question in its application, accidents and results.

Of the physiological memoirs on the question, elicited by Blundell's essays, the most prominent and well-known, probably, is that of Dieffenbach,‖ published in Müller's "Archives." The same eminent surgeon added a series of six cases to the operations practiced on the human subject, unfortunately with an unfavorable result in each case, an insuccess that is explained

* "Journal des Savants," 6 Février, 1668.

† Sprengel "Histoire de la Médecine," p. 122.

‡ "De Novo et Inanditá Medico-Chirurgica Operatione," Romæ, 1668.

§ Reprinted in this city, perhaps the earliest of the very few medical works issued here.

‖ Dieffenbach, Ueber Transfusion; Müller's Archives, 1810.

by reference to the conditions for whose cure the transfusions were performed. MM. Prévost and Dumas, published in 1821, in connection with their researches on the blood-globules, the results of experiments instituted for the purpose of determining the practical value of transfusion, endorsed with a decidedly unfavorable opinion, while Milne Edwards in his inaugural thesis (for the doctorate in medicine) in 1823, gives it a favorable mention. The subject was taken up again by Bischoff,* in a series of transfusions in which birds and mammals alternately served as source and recipient, one for the other; the great point established by the investigator, and one which forms an epoch in the history of the operation, being the efficacy and even the superiority of defibrinated blood for purposes of transfusion. Dr. Routh,† of London, published in 1849 an interesting paper on the statistics of transfusion, in which he gives the record of the published cases up to his time—forty-eight in all. The total rate of mortality in this list is 1 in 3; the reduced mortality after elimination of all causes of death that could not reasonably be attributed to the operation itself, or of conditions that rendered its good effects but transitory, is 1 in $8\frac{1}{2}$, an exceedingly low rate, although differing only by a very small fraction from the result reached by Mr. Peet, in a paper of which an abstract is contained in the "Lance" for 1842, and in which 35 cases are recorded, with a total mortality of 1 in 2.7, and a reduced mortality of 1 in 8.3. Dr. Giovanni Polli, of Milan, repeated the experiments of Bischoff in 1852, and with confirmatory results;‡ reinforcing them with two cases which indicate, if not the active value, at least the innocuity of the operation.

In 1859, Dr. Martin, of Berlin,§ presented a record of 57 cases which he had collated, of which 43 were complete successes, and 7 temporary; counting these latter among the failures, we have a mortality of 1 in 4; counting the partial and

* Müller's Archives, 1838.

† Medical Times, August 1, 1849.

‡ Archives de Médicine, Octo. 1852.

§ Ueber Transfusion bei Blutungen Neuentbundener, Berlin, 1859.

complete successes together, we have a mortality of 1 in 8; a result very nearly approaching that obtained from the two tables already noticed.

In 1868, Dr. J. Braxton Hicks* reported three cases of puerperal hæmorrhage treated by transfusion; the interest of these cases centreing principally on the fact that the blood injected was first treated by the addition of phosphate of soda, for the purpose of retarding its coagulation. The same gentleman reports six cases, in Guy's Hospital Reports for 1869; two of them treated by the old method, and four by his new method; all of these cases had finally a fatal termination.

Two of the most extensive individual records of the late years, so far as I know, are due to Neudörfer, of Vienna, and Nussbaum, of Munich.† The first named of these eminent practitioners has had the courage to publish a series of eight cases, with seven deaths; the result in the eighth case being favorable, in that the patient's life was prolonged sufficiently to justify the transfusion. The second has recorded six operations with but one death. With one exception, these fourteen transfusions were performed for causes other than hæmorrhage; and the seven unfortunate cases of Neudörfer were certainly in the first instance unpromising ones.

The annals of European surgery since 1820 are enriched with several lesser series and a large number of unique cases; all of which will be found in the tabulated record at the end of this article. Before analyzing the statistics thus accumulated, (and passing by the minor literature of the subject, in the shape of inaugural theses, essays, and journal articles,) I may make mention of two monographs, the most complete that have yet appeared, and both of them valuable contributions to surgery; those of Dr. Von Beliná,‡ of Heidelberg, and of Professor Oré,§ of Bor-

* Brit. Med. Journal, August, 1868.

† Die Transfusion des Blutes, von Dr. L. V. Belina, Swiontkowski, Heidelberg, 1869.

‡ Op. Cit.

§ "Etudes Historiques et Physiologiques sur la Transfusion du Sang," par le Dr. Oré, etc., Paris, 1868.

deaux, both works of remarkable merit, and together exhaustive of the subject up to their dates of publication.*

During the war the operation was performed once in this city, at the Quartermaster's hospital, with encouraging temporary effect, but final insuccess. I am indebted to my friend, Dr. King, of this city, for knowledge of this case; further inquiry has only verified the fact, without eliciting any details beyond the nature of the injury and the result; the name of the operator, I regret to say, is still unknown to me. To the courtesy of Dr. J. P. S. Houstoun, late President in the Transylvania Hospital, I owe the details of three cases, two performed in Philadelphia by Dr. J. G. Allen, and one by Dr. Hunter in the same city. I can hardly think that all American cases are comprised in this list of four, but these are all that a very patient investigation of published records has discovered.

II.

Let us now rapidly glance at the physiological rationale of transfusion.

The earliest authentic operations on record were, as we have seen, performed not merely for the purpose of supplying to the circulatory system a quantity of blood lost in substance, but also to render new and worthier qualities to a deteriorated fluid, being thus, in reality, based upon a higher order of pathology than that on which some operators have placed themselves, even in our time. But this excellent premise was complicated and clouded by the proposition that the physical qualities of the individual, and perhaps even his moral attributes, might be trans-

* Apropos of the two works just cited, the author owes it to himself to state that he was unaware of their existence when this paper was written, and until he commenced to prepare it for publication, otherwise he would certainly not have undertaken what had already been so ably done. But it will probably not impair the value of the results to know that they have been independently corroborated by three investigators in as many different countries. With the acknowledgment (over and beyond his general indebtedness) of 48 cases that were new to him, gathered from their united statistics, his distinguished predecessors will hold the writer guiltless of any plagiarism in this brief outline of the subject which has formed the common area of their researches.

missible along with his blood. Hence the quarrels that arose even among the very adherents of the operation, when Denis, in an age whose abundance in theoretical notions of physiology and mystical doctrines of biology rendered it pugnacious and discussive to the last degree, proposed to demonstrate that he could accomplish the purposes of transfusion in man, and by the blood of other animals. Indeed. up to a very late period, it has been deemed a *sine qua non* for the success of the operation that this interchange of circulatory fluid should take place between individuals of the same or nearly allied species—this doctrine was held even by Blundell. The cases of Denis, however, disprove it: in three of the successful cases reported by Dr. Routh, sheep's and calf's blood was used, when the patient, in Dr. Routh's words, "got well in spite of the remedies employed;" while the experiments of Brown-Sèquard* are confirmatory of the fact that identity in the specific origin of the blood is not essential to the success of the operation. *A priori* it would seem preferable to employ a fluid which, in its physico-chemical characters, approaches most nearly the blood of man, and so, doubtless, it is; the blood of the sheep, ram, and ox, which have been the main purveyors in the experiments thus far instituted in this direction, being little dissimilar to that of the human species, though not quite so near to its characters as is that of the dog and the monkey, *i. e.*, if we take as a standard the red corpuscles, (the only character by which the differences can be gauged), these being very little smaller in the two latter races than in man.

Granted, then, that blood, as nearly as possible similar to that of man, is the only essential, and that its origin, this condition fulfilled, if of secondary importance, how does it act?

According to Dr. Playfair† "the benefits derivable from it are probably two-fold: 1st. The actual restitution of blood which has been lost; and 2d. The supply of a sufficient quantity of blood to the heart, to stimulate it to contraction, and thus to allow the circulation to be carried on, until fresh blood is formed.

* "Comptes Rendus de l' Acadèmies des Sciences," 1857.

† "Handbook of Obstetric Operations," London, 1865.

Its stimulant action is probably of far the more importance." To these I would add: 3d. The supply of a sufficient amount of blood to the cerebro-spinal axis to awaken its exhaustive motive power; and 4th. The supply of nutritive material to the starved economy—every portion of which, in those conditions where transfusion is decided upon as a last resort, must be in urgent need of restoration, and in which every cell and fibre every ultimate constituent, is failing in its function by a drain of the reparative material needed to bring it, in elementary constitution, up to that point where nutrition is transformed into heat, motion and vital force. That the supply of oxygen to the tissues is not thhe solé mode of action of transfused blood is shown by the fact that, while we have conclusive evidence to show that the affinity of the fibrine of blood for oxygen is scarcely less great than that of the red corpuscles themselves, yet the experiments of Bischoff, Polli, Panum, and many others demonstrate that the transfusion is just as effectual when performed with defibrinated blood; and, moreover, the readiest and safest modes of performing the operation are those in which the venous blood furnished for the transfusion, that has already lost a sensible per centage of its oxygen, is transmitted to the patient without contact of the outer air, *i. e.*, without an opportunity of becoming re-oxygenated. *Mass* has something to do with its action, evidently, for in the cases of cholera submitted to transfusion, it was necessary to inject very much larger quantities than in any other condition, to produce a sensible effect. In one case, as much as ℥xxx were thrown in before the choleraic symptoms were overcome. I need not recall the fact that saline solutions have been injected, in cholera patients, in very much larger bulk than this.

It is then probable, that the action of transfusion as a remedial agent is, instead of two-fold, *three-fold:* 1st. Stimulant to the heart and nerve centres; 2d. Nutritive to the economy at large; 3d. Repletive to the circulatory system.

III.

In conclusion, the practical inquiry remains to be answered—

to what conditions has transfusion been remedially applied, and with what success?

1. The cases which seem, during the present century, to have been specially selected for the experimental essays of transfusion, are those of *post partum* hæmorrhage. Of these, (not reckoning those of uncertain nature), I find a record of 89 cases, of which 56 were successful; I simply give here the gross results without entering into the details.

2. For cases of surgical hæmorrhage, transfusion has been performed 23 times; result, 12 deaths, 1 doubtful, 1 in which the patient died before the operation could fairly be said to have been commenced. In two other surgical cases the result was unfortunate or null.

3. In hæmorrhages, other than surgical, (including the higher grades of anæmia due to hæmorrhage), 13 cases give 5 complete successes, 1 incomplete.

4. Of 9 transfusions performed in surgical cases attended with extreme exhaustion, 8 were unsuccessful.

5. In asphyxia of the new born child 3 cases; 2 failures.

6. In cholera, 4 transfusions were followed by death in each case, but in each case, also, after temporary, and in 1 after marked reaction.

7. Poisoning by carbonic oxide, treated by transfusion in 7 cases, yielded to it in only 2; the theory directing its use in these cases being, the restitution to the blood in the body of the oxygen displaced by the carbonic oxide taken into the circulation.

8. Dieffenbach made a trial of it once in hydrophobia, without success.

9. Leucæmia, Bright's disease, mania, and marasmus from various causes, have each been treated by transfusion, but with somewhat doubtful result. In some of these conditions, as anæmia, chlorosis, leucæmia, the operation is worthy of more extensive trial.

10. Transfusion has also been suggested, by Dr. Markham, as a means to be used in the cattle plague, and possibly the records

of veterinary surgery may contain some late cases in which this means has been used with advantage. I have not, however, looked up this branch of the statistics of the subject, its records not being so generally accessible as those of experimental science on the human subject.

It will be remarked, that transfusion has proven much more successful in the hands of obstetricians, or rather, in the obstetrical cases, than when used as a surgical or medical agent proper, but it will also be seen that accoucheurs have thus far availed themselves of it much more frequently than either of the other classes of practitioners. And while other suggestions as to the remedial efficacy of transfusion might be added to those here given, and will, doubtless, present themselves as accomplished facts in the future, it is, however, probable that it will always find *post partum* and primary surgical hœmorrhages the most favorable conditions for its application. In so far as those cases are concerned in which the operation has been performed, they speak for themselves, and the result of the array, I think, justifies the belief that transfusion is finally, and with every right, establishing its claim to be considered one of the least doubtful and most valuable resources of our art. And whatever fate the future may have in store for it, thus far its chequered career forms certainly one of the most interesting chapters in medical history.

I append a list of all the cases of transfusion that I have been able to find recorded up to date, under their appropriate heads, and in their order of occurrence. Most in the first table having all been performed for hæmorrhages occurring in the pregnant woman before, during or immediately after labor, I have deemed unnecessary any further allusion to the pathological condition of the individual patients, the necessary memoranda of the sex and morbid history being added in the remainder of the cases.

1. *Cases of Transfusion in Hæmorrhages of pregnancy and parturition.*

No.	Operator.	Result.	Date.
1	Blundell,	Death,	1820
2	Do	do	1820
3	Blundell and Doubleday,	Recovery.	1825
4	Blundell,	do	1825
5	Blundell and Waller,	do	1825
6	Brigham,	do	1825
7	Doubleday,	do	1825
8	Do	Death,	1826
9	Doubleday and Waller,	Recovery,	1826
10	Ralph,	do	1826
11	Jewell,	Death,	1826
12	Barton and Brown,	Recovery,	1827
13	Douglas Fox,	do	1827
14	Waller,	do	1827
15	Clement,	do	1828
16	Howell and Doubleday,	do	1828
17	Klett and Schragle,	do	1828
18	Klett,	do	1828
19	Savoy,	do	1829
20	Blundell,	do	1829
21	Gondin,	do	1829
22	Bird,	do	1829
23	———	do	1830
24	Killian,	do	1830
25	Ingleby,	do	1830
26	Killian,	do	1831
27	Do	do	1831
28	Internes Hotel Dieu, Paris,	Death,	1831
29	Crosse,	do	1832
30	Banner,	Recovery,	1833
31	Horling,	do	1833
32	Bickersteth,	do	1833
33	Schneeman,	do	1833
34	Tweedy and Ashwell,	Death,	1834
35	Collins,	do	1834
36	Killian,	Recovery,	1834
37	Healy and Frazer,	do	1835
38	Berg,	do	1835
39	B. Oliver,	do	1840
40	May,	Death,	1840
41	Wolf,	Recovery,	1842
42	Do	Death,	1842
43	Do	do	1842
44	Do	do	1842
45	Do	do	1842
46	Abele,	Recovery,	
47	Neumann,	Death,	1842
48	Ritgen,	do	

No. 1—Cases of Transfusion—Continued.

No.	Operator.	Result.	Date.
49	Bayer,	Death,	
50	Berry,	Recovery,	1844
51	Brown,	do	1845
52	Greaves and Waller,	do	1848
53	Norman and Ormond,	do	1849
54	Nelaton,	Death*	1850
55	Malfen,	Recovery,	1851
56	Marmonnier,	do	1851
57	Devay and Desgranges,	do	1851
58	Monmontier,	do	1851
59	Schneemann,	do	1852
60	do	do	1852
61	do	Death,	1852
62	do	do	1852
63	Turner and Wells,	do	1852
64	Higginson,	Recovery,	1856
65	do	Death,	1856
66	do	do	1856
67	do	do	1856
68	do	do	1856
69	Simpson.	Recovery,	1856
70	Wheatcroft,	do	1857
71	do	do	1857
72	Martin,	do	1857
73	Dutems,	do	1858
74	Martin,	do	1861
75	Hicks,	Death,	
76	do	do	1862
77	Weickert,	Recovery,	1862
78	Hicks,	Death,	1863
79	do	do	
80	do	do	
81	do	do	
82	do	do	
83	Greenhalgh,	Recovery,	1863
84	Thorne,	do	1863
85	S. Thomas,	do	1865
86	Mosler,	do	1866
87	Knauff,	death,	1867
88	V. Belina,	do	1868
89	Hunter,	Recovery,	1870

*Patient lived three weeks after the operation, dying at last of puerperal fever.

No. 2.—Cases of Transfusion in Traumatic Hæmorrhages.

No.	Operator.	Cause of Hæmorrhage.	Sex.	Result.	Date.
90	Blundell,	Rupture of artery,	M	Death,	
91	Danyon,	Complicated fracture,	M	do	1829
92	Philpot,	Varix in pregnancy,	F	Recovery,	
93	Roux,	Gunshot Wound, subclavian,	M	Death,	1830
94	Scott,	Hæmorrhage after removal of tumor	M	do	1833
95	Walton,	Hæmorrhage after circumcision,	M	Recovery,	
96		Complicated fracture, amputation,		Death,	
97	Turner,	Hæmorrhage after amputation,	F	Recovery,	1835
98	Lane,	do operation for strabismus	M	do	1840
99	Blasius,	Wound of thigh,	M	do	1842
100	Simon,	Wound of crural artery,	M	Death,	1851
101	Sacristan,	Rupture of Varix,	F	Recovery,	1851
102	Maisonneuve,	Hæmorrhage after removal of tumor	M	Death,	1854
103	Neudorfer,	do from epithelioma,	M	do	1860
104	Esmarch,	Exarticulation femur,	M	do	1860
105	Do	Hæmorrhage after amputation,	M	do	1860
106	Michoux,	do after removal of polypus,	M	Recovery,	1860
107	Higginson,	da do amputation,	M	do	1860
108	Braun,	Recurrent hæmor. from polypus,	M	Doubtful,	1863
109		Complicated fracture,	M	Death,*	
110	Gentilhomme,	Hæemorrhage from uterine tumors,	F	Recovery,	1866
111	Allen,	Compound fracture,	M	Death,	1869
112		Compound fracture,	M	Recovery,†	1870

* Case performed in Washington City.
† By a Prussian surgeon, during the late war.

3. *Cases of Transfusion in Miscellaneous Practice.*

No.	Operator.	Condition.	Sex.	Result.	Date.
113	Denys,	Anæmia,	M	do	1665
114	Do	Diarrhœa and vomiting,	M	Death,	1665
115	Daniel,	Debility.	M		1667
116	Lower and King,		M	Recovery,	1667
117	Blundell and Cline,	Scirrhus of pylorus,	M	Death,	1819
118	Blundell,	Puerperal fever,	F	do	
119	Dieffenbach,	Hydrophobia,	M	do	1830
120	Do	Asphyxia after Cæsarean sec.		do	1830
121	Do	Melancholia,		Unfavorable,	
122	Do	Erotomania,	F	do	
123	Do	Cholera,	M	Death,	1831
124	Do	do	M	do	1831
125		do	M	do	1831
126	Bougard,	Anæmia,	M	do	1831
127	Blasius,	Asphyxia after Cæsarean sec.		do	1832
128	Josenhanns,	Scurvy,	M	do	1832
129	Walton and Routh,	Cholera,		do	
130	Stokes,	Collapse in typhoid,	M	do	
131	Bliedung,	Pulmonary hæmorrhage,	M	Doubtful,	1839
132	Pritchard and Clarke,	Exhaustive vomiting,		Recovery,	1843
133	Uyterheven,	Hæmorrhage diathesis,	M	Death,	1848
134	Chassaignac and Monneret,	Anæmia,	M	do	1851
135	Polli,	Epilepsy,	M	Doubtful,*	1851
136	Do	Chlorosis,	M	Recovery,	1851
137	Fenger,	Anæmia,	M	Death,	1853
138	Touvenet,	do	M	Do	1853
139	Lever and Bryant,	Hæmorrhage diathesis,	M	Do	1854
140	Higginson,	Exhaustion from lactation,	F	Recovery,	1854
141	Larsen,	Pyæmia,	M	Death,	
142	Neudorfer,	Exhaustive suppuration,	M	do	1860
143	Do	do do	M	do	1860
144	Do	do do	M	do	1860
145	Do	do do	M	do	1860
146	Do	do do	M	do	1860
147	Nussbaum,	do do	M	Recovery,	1860
148	Do	Chlorosis,	F	do	1860
149	Blasius,	Leucœmia,	M	Death.	1861
150	Neudorfer,	Pulmonary tuberculosis,	M	do	1861

* This case and date are both doubtful.

3. *Cases of Transfusion—Continued.*

No	Operator.	Condition.	Sex.	Result.	Year.
151	Nussbaum,	Exhaustive suppuration,	M	do	1862
152	Do	Extreme debility,	M	Recovery,	1863
153	Do	Epilepsy,	M	do	1864
154	Do	Anæmia,	M	do	1864
155		Carb. oxide poisoning,	M	*Death,	1864
156	Mollier and Wagner,	do do	M	do	1864
157	Sommerbrodt,	do do	M	do	1864
158	Mosler,	do do	M	do	1865
159	Mosler,	Carb. oxide poisoning,	M	Death,	1865
160	Martin and Badt,	do do	M	Recovery,	1866
161	Mosler,	Leucœmia,	M	Favorable,	1866
162	Demme,	Exhaustion after diptheria,	M	Death,	1867
163	Bennecke,	Asphyxia in neonatus,		Favorable,	1867
164	Neudorfer,	Tuberculosis,	M	do	1867
165	Lange and V. Belina,	Albuminuric eclampsia,	M	Recovery,	1868
166	V. Belini,	Asphyxia in neonatus,		Death,	1868
167	Heine and Knauff,	Bright's disease,	M	do	1868
168	Mader,	Scorbutic anæmia,		Recovery,	1868
169	Allen,	Hæmorrhage diathesis,	M	Death,	1869
170	Huter,	Carb. oxide poisoning;	M	Recovery,	1870

* In a Berlin hospital; operator's name unknown.

ART. II.—ON THE EDUCATION OF DEAF MUTES. By ADOLPH KESSLER, M. D., Physician at Castle Garden, New York.

The subject of the education of deaf mutes and the satisfactory solution of the vexed problem regarding the most rational and beneficial system by which this unfortunate class may be made useful members of the human family, are of such paramount importance to humanitarians in general, and to physicians in special, that I venture to offer a few remarks. While abroad and in the pursuit of otological studies, I learned to take a deep interest in deaf and dumb institutions, and made it an object to visit them whenever I met with an opportunity; I came thus to see and to study the working of many celebrated asylums in Germany, France, etc., and what I state in this paper is to a great extent the result of individual observation and experience.

I wish above all to contrast with the American, or more correctly speaking, the French system, as founded by the Abbé de l'Epée, and introduced here by some of his disciples, the German system, which, although a century old, is yet little known and practiced in this country. While the former confines itself almost exclusively to signs, pantomimes, and the finger alphabet for the purpose of instruction and communication, the latter

makes but little use—and this is only in the commencement—of these auxiliaries, and operates chiefly through articulation and lip-reading. French and American writers are in the habit of calling the German system an "experiment" and "theory yet to be proved," but lose sight of the fact that Samuel Heinicke reduced that theory to practice in his school at Eppendorf, near Hamburg, as long ago as 1769. He was the founder of the German system, the first to teach deaf mutes the living word, and his glorious work, although for may years unappreciated and neglected, has, under the hands of earnest, intelligent, and enthusiastic pupils and followers, been revived and perfected, until it has become the *cardinal basis* for deaf-mute instruction in all the institutions of Germany, and thence been transplanted into many other countries.

In speaking of deaf mutes, it is necessary to separate that class of patients whose primary affection is not seated within the ear alone—the labyrinth and auditory nerve—but within the cerebrum, affecting alike the acoustici and the nerves supplying the tongue, the lingual muscles and the larynx—viz., the vagi and hypoglossi. Such cases, usually complicated with cretinism and essential organic defects, are of course beyond all redemption and would baffle any and every attempt at articulation, for not only are the articulating organs deprived of their motive power, but the intellectual stimulus to language is also wanting.

However, the great majority of deaf mutes are fortunately deaf only and rendered dumb alone by the eternal, never broken silence reigning around them at a period of life when language is yet a sealed book to them, or so insufficiently developed that it is effaced from memory in the course of time, and thus totally lost. This fact is fully established by statistics and pathological anatomy, and it is certain that the number of congenital deaf mutes is small in comparison with those who acquire their misfortune during the first years of life after an attack of meningitis, typhoid fever, scarlatina, and other pernicious diseases. To that large majority of deaf mutes whose intellect and articulating capacity are unimpaired, no greater blessing can be im-

parted than the faculty of reading the thoughts of others from their lips and of expressing their own by living speech. That alone restores them truly and fully to society from which they are excluded by a cruel fate, that alone can invigorate their respiratory organs, promote their physical well-being, enlarge their mental sphere, banish suspicion, gloom and melancholy, animate hope, and kindle aspirations. Does the German system, which strives to make the dumb speak, really deserve to be called a "departure from, and a reform against Nature," as hostile critics of the Franco-American school were pleased to style it? The faculty of speech is the exclusive privilege, the loftiest attribute of man, none the less so that it is a spontaneous gift and acquired without any effort of our own, the result of mental processes incited by the sense of hearing. And can we truly estimate the suffering and misery of those who think, see, feel, and move like us, yet lead only half a life, and pass through the world like spectres, deaf and mute, not hearing and not heard? Have they not a right to demand of us the restoration of this their foremost prerogative? As long as eye and touch are able to teach articulate language, it is our duty to impart it; and we must not tire in the effort, and endeavor to redeem the misfortune of our fellow-beings.

In the deaf and dumb institutions of Germany, about eighty in number, articulation and lip-reading are not only taught, but form the basis of all instruction. All pupils, without exception, that are capable of being taught, learn to read the thoughts of others from their lips, and learn to speak. At first they communicate only through signs, these being necessarily the first element of establishing an interchange of thoughts, but as soon as they get the first idea of their power of articulating, as soon as they begin to master the vowels and consonants, and to utter interjections and short words, they are made to develop with indefatigable industry the hidden resources within them and gradually build up the treasures of language, cheerfully discarding the dead signs and soulless pantomimes of a former period. Eye and touch guide them in lip-reading and articulation, and

these senses become in the course of time, according to a law of Nature, as powerful agents and auxiliaries as the ear is in normal individuals. Commencing with the articulation of *a*, *o*, *u*, *au*, *ei*, *b*, *d*, *f*, etc., proceeding then with the pronunciation of simple words, nouns, adjectives, verbs, etc., they learn by degrees to express in words the relation of things, to master the formation of short sentences, their connection with others, and the faculty of describing objects and scenes within their sight and experience. The sphere of conceptions and ideas becomes enlarged and the articulation improved by the reading aloud of books, by recitations and compositions; all sign language is rigidly banished from the higher classes, and the pupils are bound to communicate with their teachers, and with each other by the spoken word only. Thus all branches usually taught in ordinary schools—arithmetic, natural history, geography, history, etc.—are imparted to the speaking and apparently hearing deaf mutes.

The mode of instruction in the more advanced classes of the deaf and dumb institutions of Germany does in matter and in manner not materially differ from that of common schools, and the casual observer is scarcely aware of the presence of a class of deaf mutes, so successful is their disguise.

They speak well and almost fluently, answer promptly and intelligently questions propounded to them, and their voices, far from being strange and unearthly, as has been asserted by the advocates of the French method, appear in numerous instances nearly normal, only somewhat monotonous and lacking that fine modulation which the ear alone is able to impart and control, and in almost all cases perfectly intelligible. And even in that respect perseverance accomplishes wonders, deaf mutes gradually becoming possessed of a very acute feeling for the vibration of their vocal chords, for the various grades of pressure of the air-column passing through the larynx and trachea, and for the tremulous motions of the articulating organs, and in consequence of these sensual perceptions obtaining a sure criterion for their phonetic efforts. Newly received mutes are ex-

ercised month after month in the exact articulation of consonants and their different combinations, long and short, rough and smooth, as they occur in speech, without the addition of vowels. In this way the articulating organs become very pliant, and the speaking sound assumes afterward, when the vowels are added and words pronounced, with most deaf mutes, an almost normal character. Beastly, howling, and yelling voices, so characteristic of untutored or unpliable deaf mutes, are not heard in German institutions.

The more advanced pupils frequently engage in the rendering of plays, and from an improvised stage speak and act before large audiences with considerable skill and pathos. I could enumerate, if space permitted, a number of deaf mutes who have not only achieved great success as teachers of their unfortunate companions, but also fame as writers and authors. I could mention instances when, in conversation with deaf mutes, I was left wholly ignorant of their condition, and more than once it happened to me that officials connected with German institutions, who showed me around and explained things, surprised me afterward with the information that they were themselves deaf mutes. They were, indeed, triumphant witnesses and examples of the German system of lip-reading and articulation; and, if they appeared indeed to be specimens of the most favored class, the excellence of the system became none the less apparent. Moritz Hill, instructor in the teachers' seminary at Weissenfels, Prussia, a generally recognized authority on the subject of deaf mute education, and withal a man of the ripest judgment and justest discrimination, who has contributed many valuable works, and taught the discipline under consideration for forty-six years, says: "Out of a hundred pupils, eighty-five are capable, when leaving school, of conversing on commonplace subjects with their teachers, family, and friends; sixty-two can do so easily, eleven converse readily with strangers, and others learn to do this after leaving school."

And what is the opinion of Dr. Hirsch, formerly of Cologne, and at present director of the Asylum at Rotterdam, Holland,

the ablest teacher and most distinguished authority on matters relating to the education of deaf mutes—the man who has carried the German system into the Netherlands, Belgium, England, etc., and founded institutions there after the German model? In an address recently delivered before the Scientific Congress of the Netherlands, and which he was kind enough to send me, he says: "The object to be attained is, to render possible the admission of the deaf mute into society by teaching him to see, that is, to understand, the movements of the lips, and to speak in his turn. To attain this end, the act of seeing or comprehending and of speaking must be made the *exclusive principle of instruction*, and neither the finger-alphabet nor the language of signs can have any connection with it. The daily observation which I have made for more than thirty years that I have devoted to the deaf and dumb has convinced me that the art of seeing speech in the movements of the mouth is the most important of all the branches of instruction, and that therefore it should be most sedulously cultivated. Next to the art of seeing or understanding, the act of speaking is the principal object of instruction of the deaf mntes. *By this system ninety-nine out of every hundred deaf mutes may be taught*, and their progress will depend entirely on the talent and patience of the teacher. *This truth, too long and coldly doubted*, is now penetrating everywhere."

I might crowd testimony upon testimony, and carry conviction even to the most skeptical, that the German system of deaf mute education is any thing but an empty theory and experiment, but to what purpose? I content myself with quoting one more, an English authority: "In the London Asylum and in Donaldson's Hospital, Edinburgh, *articulation is professedly and systematically taught to every pupil.* In other British institutions it is taught in certain cases only. Very decided and opposite views are held upon the subject, but the question is *practically determined*, in most cases, by the financial difficulties. It would require more time and a larger staff of assistants to teach articulation to the other subjects of instruction, than the moderate means of the institutions generally could afford."

This is a true and sensible explanation of the difficulty, and, no doubt, the chief clew to the opposition the Geman system encounters in this country, apart perhaps from the fact that teachers are apt to suspect a new system, the practical working of which is not thoroughly comprehended, and reluctantly sacrifice a method that has become dear to them, and apparently very successful in its operations. To deny the excellence of the system on the score of inherent defects and physiological impossibilities, as American writers have done, is to bestow upon its promoters a *testimonium paupertatis mentis*, and implies a culpable ignorance of the splendid and palpable results achieved in nearly a hundred institutions by persistent labor, and with great difficulty and expense; to deny its practicability here on account of a lack of teachers and funds is more excusable, yet certainly not cogent, considering that this country is second to none in wealth and intelligence.

The French or American system is good and useful as far as it goes, but it is altogether too narrow, too mechanical, too rigidly conservative, and apparently untouched by the spirit of progress and reform which characterizes this era. It makes of its pupils mere thinking machines and pantomimes, and confines them within a very contracted sphere. Its chief and only reliance, besides the written word, are artificial, arbitrary signs and the finger-alphabet, methods of communication which are of a purely mechanical character, and not only incomprehensible to the great mass with whom the deaf mutes are to associate in after-life, and therefore worthless for all practical purposes, but also absolutely injurious to their intellectual progress, as they are bound to depend upon signs as the only channel and bridge connecting them with the world. If the German schools, therefore, reject the finger-alphabet, or any other mechanical system of artificial signs,* they do it from motives at once the

* Of course I have no reference to the natural signs, the simple, inborn, untaught, and unteachable signs of Nature, which serve as a means of communion for all human beings, the hearing as well as the deaf, and that are closely interwoven with the mental constitution of man, but to those only that are invented and composed for the special purpose of deaf-mute teaching.

most practical and the most philosophical. Even admitting that lip-reading and articulation have not led to *perfect* results and not benefited all alike, it must be remembered that thousands have been fully restored to society and to the freest communion with their fellow-beings. To repudiate the German system of deaf-mute education, the instruction in articulate human language, because it does not reach and benefit all alike, is a poor argument; if that were to hold good, we would be under the necessity of parting with the most beneficial systems and the most valuable remedies, perfection being as yet not a recognized attribute of human kind and things. The enemies of science and progress might just as well repudiate the teachings of the telescope, the microscope, etc., on the ground that they reveal only part of the truth, leave so much yet in the dark, and are unable to accomplish all they undertake. The all-important problem of the education of deaf mutes is, in my opinion, already solved in Europe, and the almost universal verdict is in favor of the German system, as the one best adapted to promote the true interest of that unfortunate class, and to render them happy and useful members of the human family. It is everywhere supplanting the French system. Switzerland, Russia, and Austria, have long ago adopted it; Scandinavia, Holland, and Belgium, are Germanizing their institutions, and have called German teachers and principals to take charge of them; and England and France have begun to move in the same direction. "Deaf mutes are speaking in England" is announced as a wonderful novelty by British papers and magazines. In this country also efforts are making to supplant the time-honored French method, but unfortunately they are counteracted by influential and powerful movements in the opposite direction. Yet Heinicke's system is destined to triumph, not only in Europe, but also in America, and all over the civilized world, for it is closely identified with progress and humanity.

Abbé de l'Epée, certainly one of the greatest benefactors of mankind, whose memory is immortalized in prose, poetry, and sculpture, and whose name should be honored by the remotest

posterity, gave to the deaf mutes the *sign language* and the *written word*, but he left them in their dumbness incapable of exercising the highest and noblest privilege of man—the faculty of speech. Samuel Heinicke, however, though less known to fame, did more yet; he bridged over the deep, awful chasm separating the deaf mutes from the world around them, and gave them the *living word*.

Before bringing this article to a close, I would add the concluding sentences of a letter,* received from my friend Dr. Hirsch, whose authority as a teacher of deaf mutes is everywhere recognized, no less in this country than throughout Europe:

1. The object to be attained by the instruction of the deaf and dumb is to give them, in lip-reading and in speaking, the best means to be restored to society, on the same footing with their fellow-creatures that are blessed with speech.

2. To attain this end they must learn to think immediately in words, and therefore the art of seeing or comprehending, and of speaking must be the exclusive *basis* of instruction; that is to say, the teacher must pronounce at first a vowel, a consonant, a syllable, afterward a word, and the pupil must read it from his lips, and then pronounce it himself. The teacher speaks, the pupil reads from his lips, the pupil speaks himself, the teacher gives the meaning—*this order* must be maintained during the whole course of instruction.

3. *Artificial* signs and the manual alphabet must be excluded.

4. *Natural* signs are indispensable for the teacher, to be understood by beginners—indispensable for giving the meaning of the words, inasmuch as this is not to be done by intuition or by words. From this results, however, that the use of natural

* It is, perhaps, not quite irrelevant to remark here that Dr. Hirsch's personal and influential efforts aided me greatly in the task I had undertaken, about a year ago, in a series of articles, of defending and extending the knowledge of the German system of deaf-mute education, and especially in the controversy which thence arose with some of the ablest and most prominent representatives of the Franco-American method, with gentlemen having charge of the oldest and most reputed asylums in the country.

signs must diminish according to the progress of the pupils in speech, so that at last the application of natural signs is reduced to those generally employed by the people of sound hearing.

5. Lip-reading and speaking must, therefore, not only be an *object* of instruction, but every word the deaf mute has learned to read from the lips and to speak must immediately be made a *means* of instruction and communication; so that lip-reading and speaking finally become for the deaf and dumb what the act of hearing and speaking is for their more fortunate fellow-creatures.

6. Lip-reading and speaking are the most essential branches of the instruction of deaf mutes. In comparison with each other, lip-reading has still more value than speaking. The art of writing is next in importance, still more so for deaf mutes than for people that can hear.—*New York Med. Jour.*

ART. III.—CLINICAL LECTURE ON THE CHOICE OF OPERATIONS AT ALL AGES FOR STONE IN THE BLADDER, FOUNDED ON TWELVE CASES RECENTLY IN THE WARDS. By Sir HENRY THOMPSON, Surgeon Extraordinay to His Majesty the King of the Belgians, Surgeon and Professor of Clinical Surgery to University College Hospital, etc.

Gentlemen,—Since last we discussed the subject of stone in the bladder here, but a few months ago, a series of twelve cases of that disease, at various ages, have passed through my wards. As these offer admirable material for a consideration of the different phases in which this disease is presented, I think I cannot do better than utilize it for you to the best of my ability on the present occasion. These twelve cases have embraced cases at all ages and of all kinds. I shall classify them on the board as follows:

Lithotomy.	Lithotrity.
Under 2 years.	$2\frac{3}{4}$ years.
Aged 16 "	23 "

Lithotomy.	Lithotrity.
65 "	48 "
68 "	51 "
	54 "
	60 "
	65 "
	72 "

Four were treated by lithotomy, including one of the children. Eight were treated by lithotrity, also including one of the children, an exceptional circumstance, to which I shall have to call your particular attention hereafter, and I am very pleased to add that every one of the twelve was discharged cured.

I think that the first question which will naturally arise in your minds will be—on what system was the selection of these cases made for the two operations? Why were those four cut, and those eight crushed? Are they any principles to guide the decision to cut or to crush in all cases of stone? Such a question I take to be a most pertinent one, and on the ability with which it is practically answered by the surgeon, will, I believe, depend much of his success in operating. I have often had occasion to remind you that by erring in the selection of cases for the two operations of cutting and crushing respectively, we may actually become less successful operators than if we employed, as in an old time, the cutting operation for every case of stone, small or great, young or old, which presents itself to us. It is mainly by a judicious selection of cases for the two proceedings respectively that we can gain the advantages which the modern mode of crushing the stone places within our power. I am quite satisfied, for example, that had I cut every one of those twelve individuals, I should have had a death, perhaps two. The fact, then, that I had none, is due, other things apart, to the adaptation of the operation to the case.

My aim, then, to-day, is chiefly to answer for you the following question: "How do you select for each operation, respectively, the cases best adapted to each method."

I reply, it is essential, in order to form a judgment, that you must previously become acquainted with the following particu-

lars: 1. The size of the stone; or the amount of calculous matter, if multiple. 2. Its composition. 3. The age and constitution of the patient. 4. The conditions of the local organs.

First, the size of the stone. This is the most important feature, taken alone; and the earliest examination of a case should inform us accurately on this head. For if a stone is small, it is almost certain to be successfully disposed of by lithotrity, and if it is very large it will certainly be incurring a considerable risk to depend on the lithotrite for its removal. Were the alternatives always so complete as this, there would be no difficulty in determining the question at issue; but, as you well know, there are stones of all sizes between these two extremes, and many exist on the border-ground, so to speak, of size, for which other circumstances than that of magnitude may influence a decision in the case. To speak approximatively, however, in the matter of size, I think I may fairly say, that a stone which measures $1\frac{1}{4}$ inch to $1\frac{1}{2}$ inch in its longest diameter is for the most part fairly amenable to lithotrity. A stone of which any measurement is $1\frac{3}{4}$ inches is mostly too large.

But how, it may be said, do you determine these measurements? You who accompany me round the wards know that, at my first or second visit to any case of stone, this quality of size is easily ascertained by means of a flat-bladed lithotrite. I catch the stone first in one diameter, and then in another, and the distance between the two blades is easily read off at the handle. There are other and subordinate ways—such as with the sound itself;—but none are so certain or so accurate as this, and it should always be employed. At the same time, you determine whether other stones exist besides that which lies within the grasp of your blades, by feeling for them while still grasping the stone already caught.

But you want, secondly, to know the nature and composition of the stone. This is really scarcely less essential to know than its size. Remembering, then, that three-fifths of all stones, speaking roughly, are composed of uric acid and the urates, the other two-fifths phosphatic or mixed, and only now and then an

oxalate of lime is met with, you will be prepared to expect a uric-acid stone if no circumstance contra-indicates its presence. But, further, if in an ordinary healthy man of from fifty to seventy years you find a hard stone, it is 7 to 1 that the stone is composed of some form of uric acid, pure or with a base; but if he is a strong, hale, hearty man of that age, and his urine is clear, it is 15 to 1 that the calculus belongs to this class. An oxalate-of-lime stone is more likely to be found at an early period of life, and the man has probably a less healthy appearance. If the stone be phosphatic, the patient is often broken in health, and the urine mixed with mucus, pus, phosphates, and a little blood. Next, there is the evidence to be derived from the "feel" of the stone by the sound, and the note which it utters when you give it a short, sharp, tap. With uric acid and oxalate of lime the note is clear, and on drawing the beak of the sound along it a firm hard surface is felt. But this is by no means decisive; you must feel your stone in the jaws of the lithotrite, and this will tell you more. The "feel" of an oxalate-of-lime calculus is wholly different from that of uric acid. I grant that this is appreciable rather to the practiced hand than to that of the tyro, still I can describe perfectly what I mean. Suppose you have a good-sized uric-acid stone in the blades of your lithotrite; on turning the screw a little, and gently, you can easily feel the blades "bite"—that is, sink a little into the crust of the hard body; but if you have an oxalate-of-lime calculus in the blades, on screwing you make no impression, the stem of the male blade recoils with a spring, there is no "bite;" it is as though you had a piece of unyielding metal between the blades, not like a bit of some friable rock, which the other more resembles. On the other hand, a phosphatic stone gives a soft, uncertain sound when struck with an instrument, and the sensation of a rough, gritty body to it when drawing along its surface the beak of the sound; and the "feel" in the blades is also soft, gritty, and yielding. Indeed, with a little attention to these matters, and to the state of the urine, there is little or no difficulty in ascertaining the nature

of the stone. It is quite true that in a few exceptional cases you may have a uric-acid stone, or an oxalate-of-lime stone coated thickly with phosphates, and that you may be deceived thus; but these are rare instances, and by no means necessarily interfere much practically with the object we have in view—viz., the determination of the nature of the stone before operating. Thus, a sitting or two by lithotrity will soon remove the crust, and a hard, unyielding mass of oxalate of lime may be arrived at, which must be extracted by lithotomy, unless it be small.

Thus far we have considered under two heads the character of the stone itself. We will now study the questions as affected by the condition of the patient in regard to age and constitution. First, then, as a rule, to which there are very few exceptions, no proceeding is so perfect for all cases below puberty as lithotomy. In the series before us, however, one of these exceptions has, fortunately, occurred, which I shall refer to hereafter. The best information we have enables us to say that the deaths are not more from lithotomy than one in fifteen cases below the period of puberty, and in infancy they are still fewer. All of these are consequently so far disposed of. For adults only, therefore, the question of choice remains. I may say, then, that *for a small stone, whatever the age*, without any hesitation, lithotrity is the operation, I have to repeat that I have never yet lost a case of small stone by lithotrity. I mean by "small" the size of a bean or small nut—removable, say, at two easy sittings. This is a fact of the utmost importance, and the practical value of which it is impossible to overrate. Every stone ought to be detected by the time it arrives at the size indicated; and, this being so, it is possible to remove it with a certainty of success and without risk to the patient's life.

Thus far no difficulty exists in our choice. But it is when we come to stones of an inch and upwards in diameter that other circumstances demand consideration. It is here that we look for other lights to guide us in our decision. Now I must remind you that in former time, it was usual to admit that sev-

eral conditions existed which were very unfavorable to lithotrity, and which, it was held, should incline the operator to prefer lithotomy. Among these, the strong tendency to rigors after almost any instrumental interference, supposed to depend on some derangement of the kidneys, was regarded as strongly contra-indicating the crushing operation. Now I think we may say it is very doubtful whether the phenomena so referred to are to be regarded as putting aside lithotrity altogether. I have of late given much consideration to this subject of "urethral fever," as it has been termed, although I have not time to say much about it now. I have long observed, in common with others, the strong tendency which exists in some persons to manifest constitutional disturbance after even very slight mechanical interference with the bladder and urethra. It has been the habit to say, and I have often said it, that this tendency, when strongly marked, indicates perhaps the existence of some degree of mischief in the kidneys. I confess I doubt this. I have yet to learn that this tendency is necessarily or even associated with renal disease. It is true, that if disease of those organs exist, dangerous fever is apt to arise from an operation of lithotrity, or from any slight mechanical interference. But that a very strong tendency to the occurrence of what has been termed "urethral fever" does exist in many who have no sign of renal disease is to me equally uncertain. Understand that I mean by this "fever" not ordinary surgical fever, nor pyæmia, and of course not any specific fever, as typhoid, etc., but an occurrence of the following phenomena: Within a varying period of time after the use of an instrument, it may be after the first micturition, or after twenty-four or forty-eight or even seventy-two hours, the interval being often one of apparently perfect health, the patient is attacked with rigors, followed by dry heat, then sweating, often with much pain in the back, limbs, and head, and considerable depression of the vital powers, the urine being scanty and concentrated. This paroxysm has sometimes a tendency to recur, and is influenced in this respect, as far as I can judge, by quinine. The occurrence o

these events appears to me to be more an affair of constitution or temperament than of the presence or absence of renal disease. These symptoms appear readily among certain excitable or sensitive people, and I think I am right in saying they are more common among patients who are of the Celtic than of Anglo-Saxon origin, using these terms in the broad general sense in which they have of late been usually understood. I say this advisedly, after a good deal of experience of patients among the two races, and I am quite satisfied that when I have to do with one of marked Celtic type, I am likely to meet with the phenomena described after the most delicate mechanical interference. Such bear pain badly, too, dread an instrument excessively, are impatient of control, and lose vital power rapidly under the influence of continued slight irritations. People with this constitution, whatever their nationality, do not well bear numerous sittings, nor the trouble of passing fragments, are apt to lose pluck and hope, and will be exhausted by pain and loss of rest before the numerous sittings essential for a rather large stone can be accomplished. I think, then, that this excitable temperament, this disposition to the fever I have spoken of, are the most unpromising conditions we can encounter in a patient with such a stone, so far as lithotrity is considered. And I cannot promise you that lithotomy is much better suited to them; more observation is necessary; but I am inclined to believe that when you are so unfortunate as to meet with a large stone in one of these people, you had better cut than crush. It is to be remarked, however, that it is always some one's fault if such a patient is met with having a large stone. He is sensitive, soon complains, and his stone ought to be found when it is small. There is little excuse for missing it. These patients are easily identified, not merely by the general evidences of excitability which they readily manifest, but by the tendency to rigor after the mere preliminary sounding.

Next, we have to consider the condition of the urinary organs in aiding us to determine the choice of operations. In both operations a healthy condition, or nearly so, of these

organs is of course more favorable than the contrary. What are the deviations from health most commonly met with in adult calculous patients? 1. Chronic cystitis. 2. Enlargement of the prostate. 3. Inability of the bladder to empty itself at the act of micturition. 4. Stricture of the urethra. 5. Pyelitis and renal disease.

1. Chronic cystitis is by no means always present; but, when it is, the removal of the stone mostly, not always, suffices to effect its cure. When this result does not follow the operation, the bladder probably does not empty itself. (To be considered under No. 3). Only when very severe and of long standing is chronic cystitis to be considered in connection with our special object of inquiry.

2. Enlargement of the prostate rarely opposes any obstacle to lithotrity. In some of the most favorable cases I have had, and with the largest stones to which I have ventured to apply lithotrity, this condition has been present in a marked degree. The form of the lithotrite is particularly well adapted to enter the bladder easily when there is much enlargement of the prostate. There is not necessarily engorgement of the bladder and retention of the urine, although often it is associated with—

3. Inability of the bladder to empty itself by the natural efforts. With this there is often associated more or less of chronic cystitis. If a patient passes a part of his urine, still more if he passes the whole of it, by catheter, troubles of a grave kind *may* arise in lithotrity, although this by no means necessarily happens. Those who are accustomed to daily catheterism bear instruments, and consequently lithotrity, remarkably well; and not only that, but they bear the withdrawal of the débris—a proceeding essentially necessary in these cases, since it cannot be passed by the patient's efforts. If the stone then is not large, and the cystitis is but slight, no difficulty need be apprehended. But if the bladder is irritable, the patient requiring to use his catheter frequently, lithotrity, and the presence of fragments, will increase the irritation; and he will require the catheter at such short intervals that his rest is

greatly broken, the urethra becomes very tender, and he runs the risk of making false passages, or at any rate injuring the canal, perhaps loses power to pass his instrument properly, and his position then is one of extreme danger. A patient, therefore, who requires very frequent catheterism, whose urine is loaded with thick organic deposit, and whose stone is above an inch in diameter, as a rule, to which there are exceptions, had perhaps better be cut. If the stone can be removed at two, or at most three sittings, no doubt lithotrity would be the safer operation. If six or seven should be requisite, perhaps lithotomy will afford him a better chance.

4. Stricture of the urethra is by no means an obstacle unless the stone is rather large. The method of meeting the difficulty will be mentioned in remarking on one of the cases.

5. Renal disease and pyelitis are unfavorable conditions for either operation. When the stone is small, lithotrity ought to be held responsible, and I accept the onus of removing such by crushing, although great care is necessary. The intervals between the sittings must be long, and the patient must be very carefully tended and watched.

Now for a few words touching the mode of lithotomy employed. All those in our list have been operated on by the lateral method. A few years ago you know the median operation for a time came into favor, or more correctly speaking perhaps, an extended trial was accorded to it by many surgeons in this country, myself amongst them. Confessedly, however, even on the part of its advocates, it was not considered adequate to the removal of large stones; and as meantime lithotrity has been advancing, and has become more and more extensively applicable, the want of an operation for small and middle-sized stones has disappeared. The only cutting method which, as a rule, is necessary now, is one by which we can most safely and easily extract stones of rather large size, almost all beneath these being amenable to lithotrity. For this purpose lateral lithotomy is, doubtless, preferable, and excepting only for some unusually large calculus, to which a high operation

may be better suited, is almost invariably applicable both to adults and children. Hence I have applied it to each of these four cases of two years, sixteen years, and two of sixty-five years with exceptionable results in every case. The only drawback was in one in which, owing to various circumstances, a slight degree of sloughing took place between the wound and the rectum in the second week after the operation. This was a case in which there was much deformity from anchylosed hip; in it there was much hæmorrhage, and a tube had to be introduced, with tight plugging round, to arrest the bleeding; and the stone in this case weighed nearly three ounces. When the patient left the hospital but a few drops of urine passed by the rectum, and the quantity was steadily diminishing. In the other cases no tube was employed; indeed now, unless bleeding takes place, in which case I use a "petticoated" one, well stuffed with lint, I have discarded this instrument altogether. I think its presence hinders the healing process, and often causes unnecessary and additional irritation of the bladder.

I shall now remark very briefly upon some of the cases upon the list before you.

Take the two children first—one less than two years, with a big stone; the other rather more than two years and a half, with a small one. About the first there could be no question; the stone of that small child was an inch long; the tissues, as they naturally must be, were so soft and yielding that I took the precaution of retaining the staff in the bladder until I had seized the stone, thus "keeping up my communication with the base of operations," as a military man might say. Nothing could answer better. But the other child had a stone no bigger than an orange pip, and I crushed and removed it entirely with four introductions of the lithotrite; and here, too, not a bad symptom followed. But mark one essential difference between these two cases—one child has a large wound across very important parts; the other has none. Who shall say in that former case what is divided and what is not? The little prostate of such a baby is much more than cut through completely; but

what of the seminal ducts, etc.? I have often thought I should like to know the subsequent condition in adult life of twenty patients cut for stone in infancy; and to ascertain what, if any, injurious effects resulted to those organs recognizable at that period of life. There is a subject for some of you to follow out. At all events, whatever it might be, the other little patient was saved such a risk.

Among the lithotrity cases I shall refer to the man with tight stricture. He had been cut eight years before, and he was about as feeble and unpromising a subject as one could meet with. Nevertheless, I accepted the risk of his case for lithotrity. His stone was phosphatic, and of moderate size. I dealt with him thus: I tied in a gum-elastic catheter, about No. 4, exchanging it for a larger one, and so arriving at about No. 10 in a few days; put him under chloroform, and introduced a small lithotrite, crushing and removing as much as I could. After a day or two's rest the process was reapplied, and repeated some three or four times, when the whole was successfully removed.

The case with renal disease cost a great deal of time and trouble. Three or four weeks elapsed between each operation, so much of the convalescing process had to be pursued after each sitting, in order to insure a fund of strength on which to draw for the next; for he was much depressed by fever after each. Happily we had the satisfaction of dismissing him in excellent condition—far better than I ever expected to see him.

The last case I shall particularize is that of a man aged seventy-two years, who was relieved of a large quantity of uric-acid stone in eighteen sittings. There were at least two or three calculi. On the whole, it was rather to much for lithotrity; still I hesitated about the risk of lithotomy, for it is a great risk between seventy and eighty, and I accepted him rather reluctantly for the crushing operation. No doubt if you have, say, an ounce of uric-acid calculus in the bladder, it is much safer to deal with when existing in the shape of three or more stones than as one large one. Nothing could go better

throughout the whole series until the last or eighteenth sitting, after which he had inflammation of the deep veins of one leg, with enormous swelling, induced no doubt by the passage of exudation matter from an inflamed vesical vein to the femoral. From all this he slowly rallied, and was dismissed cured; and he called upon us only last week, in excellent health, to show how his leg was rapidly diminishing in size, supported as it is by an elastic stocking which we gave him. Of calculous symptoms now he has not the slightest trace.

Here I must stop; but let me sum up all in nearly one word—namely, that three-fourths of what is spoken of as "difficulties in lithotomy" or "in lithotrity" would be resolved, in fact, would almost cease to be among the "difficulties," were only an accurate diagnosis formed in every case of stone before deciding on the operation to be performed.—*Lancet.*

ART. IV.—ABSCESS WITHIN THE CRANIUM. By Professor N. R. SMITH, M. D., Baltimore, Md.

In the summer of 1869 I was consulted by the Rev. M. C., of Virginia, of the Episcopal Church, in regard to the results of an injury of the cranium, which injury was sustained twenty years before. The injury was inflicted by an accidental blow from a sharp stone, on the left parietal bone.

The blow was followed by inflammation of the pericranium—suppuration and detachment of that membrane from the bone. Then followed necrosis, and a final separation and discharge of a small sequestrum, involving both tables of the bone. There remained a fistulous opening, which never closed during the long period of twenty years. It so little interfered with his general health that he continued, during that time, to discharge the duties of his calling, though occasionally suffering pain in the head and vertigo, especially when the discharge was in any way impeded.

Dr. Van Bibber, of this city, saw and examined the case with me. We found the fistulous orifice surrounded by granulations, which in a measure impeded the discharge. The pus which was daily discharged was of ordinary consistence and appearance, but was fetid.

We inserted with care an ordinary probe, which, to our surprise, sank by its own weight, apparently through a fluid, into the cavity of the cranium fully two and a half inches, when it encountered the membranes of the brain. By exploring with the instrument cautiously, in different directions, we ascertained the existence of a hemispheroidal cavity within the cranium, almost coëxtensive with the parietal bone.

On withdrawing the instrument, we found it covered with fetid pus. The opening in the cranium was smaller than a quill, and was obstructed by granulations investing its canal. The efforts of nature to restore the normal condition of the parts were defeated by the inadequacy of the discharge, and the occasional aggravation of symptom was attributable to the increase of the granulations, which obstructed the flow.

I immediately advised, Dr. Van Bibber concurring, that the crown of a trephine should be applied, and a button of bone be removed from the cranium.

With the aid of Dr. Van Bibber, I immediately applied a trephine about seven-eighths of an inch in diameter. The progress of the section was slow and difficult, the bone being found of ivory hardness, much thicker than common, and of unequal thickness in various parts of its circumference. We proceeded, however, without hesitation, knowing that the membranes were far removed from the inner surface. At length the button was pryed out, and there immediately issued some three ounces of fetid pus.

We feared some disturbance of the cerebral functions from the sudden removal of such pressure from that organ, but nothing notable resulted. We applied light dressings, so as to allow the discharge to flow without impediment.

No morbid phenomena of any kind resulted. By inspection

and by the probe it was ascertained that the dura-mater was slowly rising and the cavity being obliterated. He left us in some ten days after the operation.

I saw the patient last summer on his journey to the Episcopal Convention. He had entirely recovered.—*Balt. Med. Jour.*

ART. V.—CLINICAL LECTURE ON A PECULIAR FORM OF WRIST-DROP from Paralysis of the Musculo-Spiral Nerve in Fractures of the Humerus. Delivered at the University College Hospital. By Professor ERICHSEN, M. D., Senior Surgeon to the Hospital, and Holme Professor of Clinical Surgery.

Gentlemen,—Simple fractures of the long bones are seldom accompanied by any serious complication; the vessels and nerves of the limbs being so situated, and being so well protected by the interposition of a layer of muscle between them and the bones, as to escape being injured, in the vast majority of cases, by the ends of the fractured fragments. There are, however, two exceptions to this general rule: One in the upper, the other in the lower, extremity. In the upper extremity, in the relation of the musculo-spiral nerve to the shaft of the humerus; in the lower, in the position of the posterior tibial artery in reference to the upper end of the tibia. In both these instances the position of the nerve and of the vessel is such that it may be seriously injured by fracture of the contiguous long bone.

It is not my intention to-day to speak of the injuries that the posterior tibial artery may sustain in and from simple fractures of the bones of the leg; but I shall confine my observations wholly to lesions of the musculo-spiral nerve from fractures of the humerus.

The complication of an injury of the musculo-spiral nerve, in a case of simple fracture of the humerus, must certainly be of rare occurrence, as I find no mention made of it in the standard works on surgery that I have had an opportunity of consulting,

and I do not recollect to have met with this accident until recently. We have, however, had lately three cases under our care here, in which, in consequence of the injury to the musculo-spiral nerve or one of its branches, more or less complete paralysis of the muscles supplied by that nerve has resulted. These cases I will presently relate to you, and on them I found the observations I have to make on this interesting subject.

When we observe the manner in which the musculo-spiral nerve winds closely round the back of the shaft of the humerus in its flattened groove, and how in its course downward toward the forearm it comes into tolerable close relations to the outer condyle, we can easily understand how in fractures of the shaft the main trunk may be implicated, and in those of the condyle one or other of its chief divisions injured.

When the main trunk of the musculo-spiral nerve is injured to such an extent as to induce complete paralysis of it, both the supinators of the forearm and all the extensors of the wrist and fingers lose their power, and the patient becomes utterly incapable of performing those movements that are dependent on the action of these muscles. The hand consequently falls into a state of pronation and flexion presenting the characteristic signs of "wrist-drop."

When the posterior interosseous division of the musculo-spiral is the nerve that is injured, the loss of supination and of extension is not so complete. The supinator longus and extensor carpi radialis longior, being supplied by branches from the main trunk, are not paralysed, and thus a certain though very limited movement in the sense of supination and extension is preserved, although the forearm and hand fall naturally into a state of pronation and flexion.

These different conditions are well illustrated in many cases, which I will now show you.—*Lancet.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

NOTE.—Dr. Holloway has been unable to prepare this Department. The editor has given the best practicable substitute.—ED.

On the Use of Ergotin in Aneurism.—By Dr. Dutoit, Berne. It will be remembered that Professor von Langenbeck, of Berlin, published* last year two cases of aneurism successfully treated by subcutaneous injection of extract of ergot. The statement made a most profound impression, and might have met with incredulity if it had emanated from a less reliable source. In the recent number of Langenbeck's Archives, Dr. Dutoit records another successful case, in which the ergot had displayed great efficacy, although digital compression was likewise used toward the end of the treatment.

The patient is forty years of age, and of rather vigorous health. In October, 1866, he was violently thrown forward by a vehicle striking him on the back. Fell, with outstretched arms, on his hands, and felt at the same time as if something had torn on the left side of the neck; otherwise no pain. Six weeks after, a painless ecchymosis below the left clavicle, gradually increasing to the size of the palm of the hand. In ten months it had entirely disappeared.

The first signs of aneurism were noticed four months after the accident, but none gave more annoyance than the neuralgia along the course of the brachial plexus; besides there were the usual physical symptoms. The patient came under the care of the author on the 21st of October, 1867, presenting the following: A tumor of the size of an ostrich egg, occupying both the left supra and infra-clavicular regions; rather diffuse pulsation over its entire surface; œdema extends beyond its bor-

* Berl. klin. Wochenschrif, No. 12, 1869; and St. Louis Med. and Surg. Jour. 1869, p. 318.

ders toward the face; a large network of varicose veins traverses the swelling, and connects with the left epigastric vein; lips and left cheek livid.

Diagnosis: Aneurysma spurium circumscriptum. Ligature inside or outside of the scalenus muscles not to be entertained, on account of the inaccessibillty of the artery. Brasdor's method too risky; digital compression impracticable. Thus no alternative was left but to try Langenbeck's plan.

The author, having procured the solution of ergotin as recommended by Langenback, commenced the hypodermic injections on the 25th of October, and continued them, in the following manner, until the 1st of December:

Injections.	Date.	Dose.	Injections.	Date.	Dose.
1 -	Oct. 25.	gr. ss.	9 -	Nov. 12.	gr. ij.
2 -	" 27.	gr. ¾.	10 -	" 15.	gr. ij.
3 -	" 29.	gr. j.	11 -	" 18.	gr. iiss.
4 -	" 31.	gr. j.	12 -	" 21.	gr. iiss.
5 -	Nov. 2.	gr. j.	13 -	" 24.	gr. iiss.
6 -	" 4.	gr. iss.	14 -	" 27.	gr. iiss.
7 -	" 6.	gr. iss.	15 -	Dec. 1.	gr. iiss.
8 -	" 9.	gr. iss.			

Diminution was observed after the fourth injection; the tumor flattened; the pulsation was of less extent and force. Thenceforward the aneurism grew smaller in proportion to the number of injections; and rest ensued.

The injections, being made directly over the tumor, by raising a cutaneous fold, were invariably followed by intense pain lasting from one to two hours, induration, and scab; but at no time by abscess. In this way the tumor became gradually enveloped by such nodules, which resisted the pulsations and led to the obliteration of the varicose veins. Simultaneously with the decrease of the aneurism came a marked change of the physical signs. The cardiac sounds, formerly more distinct over the swelling than over the heart, became muffled, and, as it were, more distant. Very marked hardness of left radial pulse.

It would seem that ergot was fully equal to the emergency. Notwithstanding, the author determined upon employing com-

pression, since the subclavin artery had become free from the overlapping aneurism. Luer's compressorium unavailable.

Having procured the coöperation of three practitioner's, five students, and two nurses, digital compression was commenced on the 6th of December—two of the assistants being in attendance for one hour, and then relieved by two others. This (the compression) was carried on for three hours each time, twice a day, from the 6th of December to the 12th, inclusive—in all thirty-nine hours. In the beginning it required some force to completely arrest the light pulsation of the tumor still existing and that of the radial artery; but gradually it became an easy task.

At the end of the procedure the pulsations had completely disappeared; but the *choque* could be detected with which the column of blood struck against the obliteration (as in the case of ligated arteries). Moreover, all the consecutive symptoms had vanished.

Notwithstanding the case was completely relieved, the author instituted ten more injections, in long intermissions, at three grains each—the last being on the 25th of March, 1870.

In conclusion, the author favors the opinion that the cure might have been effected without the assistance of digital compression, but scarcely within the same time; whilst the utility of the ergot, in reducing the aneurism preparatory to compression, had been established beyond dispute.—*Arch. f. klin Chir.*, xii., 3, 1871.—*St. Louis Med. Jour.*

On the True Nature of the so-called Skin-Grafting.—By David Page, M. D., late President of the Royal Medical Society of Edinburgh.—In December last I wrote an account of my experiments on skin-grafting in the "British Medical Journal," and showed at that time that the physiological changes involved in the growth of the graft, as well as the nature of the graft itself, were quite different from those previously supposed. Indeed, so far as I am aware, my communication, embracing, as it did, the result of microscopic investigation into the subject, was the first in which the true explanation was given of what

really constitutes skin-grafting. The conclusion at which I arrived was that, when a piece of the integument is removed from a part of the body, and placed upon the surface of an ulcer showing a disposition to heal, there was no transplantation of cutis, but of cuticle, the deeper layer of which, or *rete mucosum*. formed the essential portion for subsequent development and growth; and the young newly-formed cells of this layer served as the basis for the production of cicatrix. Further, I found that the artificially induced cicatrix, and that which was spontaneously projected from the margin of the ulcer, were identical in structure, and equally possessing the same low vitality and tendency to destruction, from causes that could not affect the normal integument. These results proved satisfactorily that the *rete mucosum* or *stratum Malpighii* was the part immediately concerned in the process; and that a graft, to be successful, need consist of this layer only. I held, therefore, the view that it is not a transplantation of skin, but of epithelium; not skin-grafting, but epithelium-grafting.

The numerous clinical observations that have appeared in the medical journals since May of last year, when Mr. Pollock, of St. George's Hospital, introduced the process of M. Reverdin into England, show, by their discrepant statements, that much misunderstanding exists as to the true nature of the changes observed. In several instances, the graft has been supposed to disappear for a time, and to reappear when growth sets in. This phenomenon I have elsewhere explained to arise from the simple fact that, after the desquamation of the upper and horny cells of the transplanted epidermis, which always occurs, the young layer of *rete mucosum* left adherent to the granulations is transparent, and transmits the vascular appearance of the subjacent textures, in proportion to the thickness of that layer.

It has been supposed, also, that the papillary layer of the cutis constitutes the essential portion of the graft; and that while, on the other hand, too deep an incision into the subcutaneous areolar texture was detrimental to the life of the graft,

too thin a section, on the other, was equally to be avoided, as it would not embrace the papillary layer.

It is interesting to remark that my views as to the epidermic nature of the graft were corroborated by the clinical results obtained by Dr. David Fiddes, of Aberdeen, an account of which appeared in the "Lancet" for December 17th, simultaneously with my own communication in the "British Medical Journal."

Dr. Fiddes used in his cases scrapings of epidermic scales simply; which, being placed upon ulcerated surfaces, were followed by the results of ordinary skin-grafting. And in the article on this subject by Dr. George Macleod, Professor of Surgery in the Glasgow University, in the "British Medical Journal" for April 1st, my views as to the value of the *rete mucosum* in the process are supported by the inferences drawn by him from his own experiments. He states that "the most reliable results were got from the employment of such a thickness of skin as might be supposed to include the *stratum Malpighii*, with such a thin section of the corium as served to give it consistence. If a deeper layer were taken, it rarely succeeded, and the use of a less deep part has been already alluded to. That the succeeding growth is due to the cells of the *rete mucosum*, appears probable. An experiment, alluded to further on, in which the fluid from a blistered surface was used, would point in that direction."

Dr. Macleod failed, as others have done, to obtain very satisfactory results from mere epidermic scales scraped off the surface, as proposed by Dr. Fiddes; and this I consider simply owing to the fact that the uppermost layers of the epidermis consists of cells that are being cast off as effete, and which have undergone chemical and physical changes, rendering them less certain than the newly-formed and soft cells of the deeper layers. The same reasoning applies to the success of the fluid of a blister as a substitute for the epithelial graft.

The advantages sought for in skin-grafting are three-fold—viz.: 1. Rapidity of cicatrization. 2. Formation of an elastic

and durable cicatrix. 3. Prevention of excessive contraction of surrounding textures, and subsequent deformity.

With regard to the first of these, it is necessary that the ulcer should be in a perfectly healthy and healing condition, as evinced by the vascularity of its edges and vigor of the granulations on its surface. Hence, the weak and indolent and callous ulcer must first undergo the usual means of treatment to bring them into this state. In every case where a graft has been transplanted upon an unhealthy or weak ulcer, the result has been a failure.

The formation of a cicatrix of greater durability and elasticity than that spontaneously formed, is an advantage which has been misconceived, and cannot, I think, be actually attained. To replace effectually the lost integument over a broken surface, nothing short of a true plastic operation would avail, such as the Taliacotian and other modes of restoring defects of the nose and lips, wherein a flap embracing the entire thickness of the cutis vera, with its vascular supply, is only partially raised and removed. One thing must be borne in mind in estimating the value of a new formation such as a cicatrix; and that is, that it is the result of rapid cell-development and growth, the final effort on the part of living textures to close over a breach of surface that has contracted to the utmost of the laxity of neighboring parts. Now, it happens that both of the cicatrices formed on an ulcer healed by the assistance of skin-grafting are identical, and equally devoid of any approach in quality or texture to true skin. The fibro-vascular or deep layer of the cutis, with the hair-follicles, sebaceous, and sweat-glands, if destroyed, cannot be regenerated; but the papillary layer, excepting those papillæ of special sense containing the terminal twigs of the sensory nerves, is probably represented in the cicatrix, although it is also true that the latter never attains the same degree of vascularity, and, as a consequence, is of much lower vitality, as shown in the manner in which old cicatrices give way under cachectic states of the system.

As for the prevention of deformity and excessive contraction

of neighboring parts, this must depend upon the original extent of the ulcer and the position in which it occurs; the less good can be effected by skin-grafting in this respect in proportion to the amount of tissue destroyed and laxity of the textures around. Take, for example, a burn of the soft parts; it is well known that deep-seated contraction, leading often to irremediable deformity, goes on for some time after the surface has cicatrized; and how mere rapidity, in the latter respect, effected by the adventitious aid of skin-grafting, could obviate these disastrous results, I am at a loss to comprehend. The only advantages, then, of skin-grafting, I must contend to be acceleration of cicatricial growth.

The method of performing the operation adopted by myself is as follows: The most convenient source for the grafts is the skin over the biceps muscle of the arm. This should be gently pinched up by dressing forceps, and then cut off by a stroke of the scissors. The thickness of the cuticle varies in differnt parts of the body; but, as I hold it essential not only to avoid the subcutaneous textures, but the cutis itself, the graft should be removed without any bleeding, if possible—an occurrence which would show that the papillary layer of the cutis, at any rate, had been reached. The size of the elliptical piece of the cuticle thus removed should not exceed a quarter of an inch in diameter. The graft is then simply placed upon the surface of the granulations, which it is quite unnecessary to irritate or disturb in any way; and the site chosen should be that where new growth is most desirable. To retain the graft in position, I have used strips of isinglass plaster placed over the surface of the ulcer, and carried partly around the limb. The ordinary dressings may then be applied, and the parts treated in the ordinary way, with systematic bandaging and rest. The progress of the graft may be observed three or four days later, carefully raising the strip of plaster; and in a period varying from that time to a week or so, growth begins. The superficial and older layer of the epidermis has then desquamated, and will be found lying loose on the surface, while the deep layer of the *rete*

mucosum is left adherent to the granulations, forming a delicate pellicle of a bluish tint. Henceforward, from day to day, as the dressings of the ulcer are renewed, and the progress of the graft seen, its area grows larger and larger by cell-development at the periphery, probably, too, accompanied by coincident increase of growth from the margin of the ulcer, which seems to receive a fresh stimulus from the presence of the graft. Ultimately, the surface will close over, and present the ordinary appearance of a cicatrix. Why transplanted epithelium should lead to the development of its elements, while the granulations themselves appear to be incapable of setting up similar points of cicatrization spontaneously over the surface, and growth, under ordinary circumstances, only proceeds from the margins, is difficult to understand. Nevertheless, it is a well-ascertained fact. Nor does the transplanted epithelium afford a mere point of attachment for such a spontaneous formation; as experiments with pieces of India rubber and sheep skin, substituted for skin grafts, showed that these only acted as foreign matters, causing destruction of the granulations on which they lay.—*British Medical Journal*, May 27, 1871.

On the Administration of the Ammonia by Inhalation.—By J. H. H. Lewellin, M. R. C. S., Australia.—The idea of administering ammonia by inhalation occurred to Mr. Lewellin in the following manner: He was called to see a patient who had been a hard drinker, and who had a fit, followed by epistaxis and subsequent syncope. Mr. Lewellin thought the patient was dead, owing to his cadaverous appearance, and was preparing to inject some ammonia into the veins, as the power of swallowing seemed to be lost, when the thought struck him that the ammonia might be introduced by the pulmonary system, if the patient would inhale, as well as by the injection into the veins. He accordingly poured some liquor ammoniæ fortis on a handkerchief and applied it in the same way as chloroform is administered. The effect was immediate, and the pulse, which was before imperceptible, was now distinctly felt. In about

twenty minutes after the commencement of the inhalation the patient opened his eyes and stared about him, and then fell back on his pillow and appeared dead, but on recommencing the inhalation he again revived. Mr. Lewellin, now fearing that bronchial irritation would ensue, discontinued the inhalation, but was compelled to resume it in consequence of the tendency to fainting. After about three hours' inhalation, the patient began to be sensible of the smell of ammonia. He inhaled altogether between twelve or fourteen drachms of liquor ammoniæ fortis in four hours. He eventually recovered without any bad symptoms. Mr. Lewellin used the same agent in another case, which was one of anæmia from excessive flooding, and was again successful. He suggests that when this method is adopted some precaution should be taken to prevent the vapor of ammonia from entering the nares, at the same time leaving those openings free.—*Australian Medical Gazette—British Med. Chir. Review.*

Nitrite of Amyl.—Professor Silliman, in a recent lecture before the Yale Medical Institute, described the nitrite of amyl as an effective agent for the removal of muscular spasm. Its vapor, he says, extinguishes flame, and acts as an antiseptic. When inhaled, it acts in a wonderful manner to excite the circulation—the action of the heart in man, and in warm-blooded animals, being doubled in rapidity in thirty seconds. This intense action is followed by great suffusion of the skin, by breathlessness like that produced by violent running, by a peculiar sensation and fullness of the head, with throbbing, and ultimately by failure of muscular power of the extremest kind. It produces no destruction of the nervous sensibility, and in animals no increase of sensibility up to the moment of death. It is not an anæsthetic. It appears to act by arresting the progress of oxidation in the tissues.

As a remedy for disease, the great virtue of nitrite of amyl is its specific power of removing muscular spasm. Beneath its first and most conspicuous power of producing excessive action of the heart and apparent excitement, there is another and

more permanent condition produced—namely, a temporary paralysis of muscle and a suspension of all outward manifestations of life which in the lower animals (frogs) can be sustained without actually destroying life. The observation of Dr. Richardson led him to point out the importance of this nitrite in spasms, and especially to meet the spasmodic disease, tetanus (or locked jaw), over which he inferred it would have a direct controlling power. This sagacious suggestion has since been completely verified: First, by Dr. Brunton, of Edinburgh, in *angina pectoris*, and subsequently by others in the same disease, as also in terrible pain from spasm of the bowels, where when the nitrite was administered, the patient exclaimed that he "was transformed from agony to heaven, in a moment." Mr. Forster, an eminent practitioner of England, administered it to a man suffering from tetanus, where the spasms were so severe that the patient is described as "having been rolled up like a rigid ball." Five drops of the nitrite inhaled from a handkerchief induced immediate lessening of the spasms. This treatment was assiduously renewed on each return of the spasms for nine days, when he had inhaled an ounce of the fluid, and the case was a complete recovery.—*Med. and Surg. Reporter.*

A New and Important Therapeutic Property of Quinine.—The following conclusions are arrived at in a memoir of 277 pages, by Doctor Monteverdi:

1. The action of quinine and its preparations is especially upon the grand sympathetic nervous system.

2. This action causes contraction of the muscular fibres supplied by the sympathetic, particularly those of the uterus, urinary bladder, the intestinal canal, and the blood-vessels.

3. This action may be physiological according to the amount of quinine given. If the fibres are relaxed, quinine restores their tone, and enables them to perform their functions. If they are contracted and excited, quinine produces a rigid tonic contraction, which renders them unable to perform their functions.

4. This property is especially marked on pregnant women, on

whom quinine must be used with care, as it is able to and frequently has caused premature labor.

5. In labor it may be often used with certainty and advantage to stimulate the uterine contractions, for which it is preferable to ergot for the following reasons: It does not injure mother or fœtus; it acts very rapidly and surely; it produces regular, intermittent labor pains, precisely normal in character; it may be administered at any stage of labor, from before the bag of waters is ruptured or the os dilated, to the time when the head is on the perineum.

6. In cases of the retention of the placenta, either after labor or miscarriage, it is of great value, causing expulsion, and replacing manual assistance.

7. In menorrhagia in pregnant or confined women, it is to be preferred to ergot, as safer and more certain.

8. In amenorrhœa from uterine inertia, it is of great service.

9. In puerperal fever it is very useful, not only as a preventive, but also to combat victoriously the disease in its early stages.

10. In hysteria and hysteralgia it increases the uterine excitement, and more often is hurtful than beneficial.

11. In all the diseases of the digestive apparatus, or of the genito-urinary system, it is useful when they depend upon atony; if irritation or inflammation be present, it does harm. In the normal condition of the bladder it will sometimes cause such a rigid, persistent contraction of the neck, as to render the evacuation of urine difficult, or even impossible.

12. Small doses of quinine augment the force and frequency of the heart's action; large doses enfeeble it.

13. Opium and morphia are antagonistic to quinine, and are useful when it has produced toxic symptoms.

14. To produce physiological effects upon the uterus, to excite contraction, etc., 20–25 centigrammes (3 to 4 grains) should be given at each dose; to produce the paralytic effect, the dose should exceed a gramme (15.43 grs.).—*Annales et Bulletin de la Societe de Medecine de Gand*, May, 1871.—*New Remedies.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—PUERPERAL OVARITIS. By JOHN A. OCTERLONY, M. D., Professor of Materia Medica, Therapeutics, and Clinical Medicine in the Louisville Medical College, Louisville, Ky.

Mrs. C., aged twenty-eight years, when five months advanced in pregnancy, was taken sick with the pains of miscarriage. At this time she was the mother of two children, the younger of whom was nearly two years of age.

With the exception of occasional attacks of catalepsy connected with spinal irritation, her general health was tolerably good.

She miscarried December 26th, 1870, 2 A. M. The operation was completed before my arrival—neither did she require assistance from another. December 28th, the symptoms were insomnia, a frequent small and feeble pulse; palpation produced some pain and much soreness in the hypogastric and right iliac regions; tympanites; discharges of pus in large quantities per vaginam; vagina hot and dry. Excepting in the latter stage of the disease, an occasional flush of the cheeks; no increase of the temperature of the surface; generally a diaphoresis; from first to last her hearing was extremely acute. This symptom, Dr. Thomas Hawkes Tanner states, when it occurs during the progress of severe diseases, renders the prognosis suspicious, to say the least. Mind clear and very hopeful. She always considered herself better, and was confident that she would soon recover.

When she was assured (eight hours ante mortem) that her recovery was impossible, and that she would die that night, her reply was: "I know I am better, don't you think so Doctor? The bowels are not so much swelled as before—I know I will soon be about the house."

She recognized voices, and understood the conversations of

those below that were unintelligible to those that were in the room with her at that time.

Treatment.—Terebinthinate stupes over the whole abdomen, and, although disapproved in such cases by high authority, epispastics on the same; and finally emollient cataplasms; the mercurial impression was established with pil. hyd.; morphia or chloral were given in sufficiently large doses to cause drowsiness, to the influence of which she was by no means susceptible; per vaginam injections of weak solutions of carbolic acid, and afterwards of diluted Labarraque's solution. A nutritious diet at first, afterwards a stimulating one: Huxham's tincture, quinine, etc. January 12, 1871, mortuus est. January 14th, an examination was made of the uterus and its appendages. But half of the right ovary was left, and that was in a gangrenous condition. The ovarian abscess was large, for the cul de sac of peritoneum in the right side of the pelvis, and the recto-vaginal space contained not less than half a pint of pus. Professor T. Gaillard Thomas states that from twelve to sixteen ounces is generally a large accumulation. The uterus was congested; contained no foreign body, and was not more than twice the size of the virgin uterus.

I can find no authority for asserting that the abscess discharged, in part, through the fallopian tube.

In "Thomas on the Diseases of Women," a case is quoted where, at one point, the fallopian tube was the size of a man's thumb. But nothing is said of a discharge of pus through the tube. But we do know that "fluid thrown into the uterus is liable to pass through the fallopian tube into the peritoneal cavity and produce the most alarming collapse, or peritonitis and death. The literature of the subject contains a number of cases in which death has thus resulted."

In days of yore Dewees's wrote: "No one instance with which we are acquainted would lead us to the conclusion that any remedy has removed a disordered condition of these parts." "These bodies are more frequently diseased or disordered than

the uterus itself; but neither the diseases nor disorders to which they are liable are of such dangerous consequences."

Professor Thomas believes, "During the past ten or fifteen years full amends have been made for this delay in progress, for since that time no portion of the field of gynæcology has received more attention or been more thoroughly investigated than that which now engages us—diseases of the ovaries." "Unfortunately, there is one set of ovarian affections with reference to which these statements are not true—those of inflammatory character. Our means of diagnosis of ovaritis, both acute and chronic, is, in spite of all the labors alluded to, so elementary and unreliable that the result is discordance of views, and uncertainty as to pathology and therapeutics."

This case was at variance with Professor Gross's description of this disease. For she had neither retraction of the limbs, high fever, nor rigors with the suppurative stage.

ART. II.—LITHOTOMY. By JOSEPH W. THOMPSON, M. D., Paducah, Ky.

CASE I.—Thomas J., of Marshall county, Ky., aged seventeen years, consulted me early in the spring of 1868 on account of a difficulty of the bladder. The general symptoms indicated stone, and after sounding him twice, at different times, I was satisfied of the presence of a stone. I gave him a short preparatory treatment, and on the 10th of the following March, performed the lateral operation, removing a stone as large as an ordinary guinea egg. Patient recovered promptly, not having an unpleasant symptom. Urine passed by the natural channel on the eighth day, and at the end of the third week he returned home, wound entirely healed. I was assisted in this operation by Drs. Maxwell, D. D. Thomson, and H. M. Gibson.

CASE II.—James R., of Graves county, Ky., aged about fifty-five years, consulted me through his family physician, Dr. Wm. Miller. Dr. Miller stated, in a letter to me, that he was satis-

fied that he was suffering from stone in the bladder, and that Mr. R. desired me to visit him and operate. I wrote to Dr. Miller to give him a few days preparatory treatment. On the 21st day of March, 1870, in the presence of Drs. Miller, of Graves county, and Yandell, of Calloway county, and H. M. Gibson, of this city, I sounded the patient while he was under the influence of chloroform, and we were all readily satisfied of the presence of a stone. I proceeded to make the lateral operation, removing a number of calculi about two thirds as long as an ordinary index finger, and a little larger. He suffered no inconvenience after the operation. The wound healed somewhat slower than in the first case. The after-treatment was conducted by my friend, Dr. Miller. In the latter part of the fifth week after the operation, he was attacked with bilious remittent fever and gastritis, which caused his death in the sixth. Dr. Miller wrote me that when he was attacked with bilious fever and gastritis, the wound had about healed, and that there was no connection between the wound and the attack of fever. His home is in a decidedly malarious section.

CASE III.—P. W. B., aged fourteen years; sounded him about the first of February last, and readily detected the stone. The only preparatory treatment given was two purgatives, and some stimulating diet for two or three days. On the 16th of that month I performed the lateral operation, removing three stones. The largest stone was thicker than an ordinary hen egg, but not quite so long. The other two are each about one-third that size. Present at this operation were Drs. R. Saunders, J. W. Becher, E. B. Richardson, J. G. Brooks, and H. M. Gibson; all of this city, with Dr. Robertson, of Florence Station, in this county. No unpleasant symptoms followed this operation. The wound progressed well, and healed until only a small fistula remained. This fistula healed very slowly, being about two months closing up. I cauterized the fistula every five or six days with lunar-caustic, but think Prof. Van Buren, of New York, is correct when he says that the wounds from the lateral operation in lithotomy are sometimes slow in heal-

ing, but will ultimately do so unaided. The stones made such a bulk in the bladder, that when it was emptied of urine, which was very frequently, suffering caused by contraction and spasms was so intense that it was almost unbearable. For the last eight years he had suffered each day as I have just observed. His grand-parents, with whom he lived, stated that the only comfortable night's rest he had enjoyed for a number of years was that succeeding the operation. This case proves the blessing of the surgeon's knife in some instances.

In my first two operations I was rather careful in dissecting down to the staff. Before making my third operation, I read Sir Henry Thompson's Lectures on the Genito-Urinary Organs, in which he advises, in making the first incision, to go boldly down, so that you can feel the staff satisfactorily after the first cut, and save much embarrassment in reaching the groove in the staff that would result in a successful dissection to it. So when I performed my third operation, appreciating the difficulty that I had met with in reaching the groove in the staff by careful dissection, I followed the suggestions of Sir Henry Thompson, making the first incision bold and deep, going so near the staff that I could easily introduce my finger into it, and the result was, that I met with no embarrassment in getting the knife promptly lodged in the staff.

I would suggest to all young operators, to which class I belong, to make the first cut free and deep, so that they may know the comfort of realizing promptly the groove in the staff which is to be the safe guide into the bladder.

ART. III.—A CASE OF DISLOCATION OF THE HEAD OF THE FEMUR into the Sciatic Notch—Reduction by Manipulation. Reported by A. SAYRE, M. D., of Burlington, Boone County, Kentucky.

Dr. J. S. Smith and I were called January, 10, 1871, to see Mr. S. Baldwin, a stout muscular man, aged forty, who had

been thrown from a wagon. We found him, five days after the accident, lying on his left side, the right leg slightly flexed on the thigh, and the thigh on the pelvis. The knee turned in and advanced slightly over its fellow, the great toe resting on the dorsum of the left foot, the trochanter quite prominent. Could neither rotate nor flex the limb without causing intense pain. Tried to place the foot and knee of the injured limb under the sound one, but could not without increased suffering. By accurate measurement found the injured limb one inch and a half shorter than the sound one. From all the symptoms we diagnosed dislocation into the sciatic notch. Before moving him gave chloroform till he was thoroughly anæsthetised, then placed him on his back. Dr. Smith attended to the chloroform while I grasped the leg, just above the ankle, with my right hand, and the knee with the left, flexed the leg upon the thigh and the thigh upon the pelvis, carried the foot across the sound thigh, and the knee over the abdomen, as far to the left side as it could be forced; retained it in this position about ten seconds, then gradually carried the knee around over the abdomen to the right, till the thigh formed a right angle with the body. At this stage of the manipulation, by means of a towel placed under the thigh, close to the pelvis, and the left hand pressing down the knee, we lifted the superior extremity of the thigh slightly upward, and retained it in that position for about fifteen seconds, then gradually carried the limb down parallel with its fellow. Upon measurement found the limbs of exactly the same length. Equal prominence of the great trochanters, etc. He soon rallied from the anæsthetic, and could flex or extend the limb at pleasure, with but slight pain; could place the foot or knee under the sound limb with ease as he laid on his back; could change his decubitus with but slight difficulty. We were satisfied that we had reduced the dislocation, but at what stage of the manipulation the reduction took place we could not tell, as the characteristic snap was not heard by either of us. We bound his thighs together, gave a dose of morphine, and left him. Dr. Smith called next day, found him comfortable, and took off the band-

age. In a few days he was walking about in his room, and in three weeks was laboring regularly on his farm.

The object of this report is to show that chloroform and well directed manipulation may supersede the pulleys in all recent luxations.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

PROCEEDINGS OF THE MEDICO-CHIRURGICAL SOCIETY. Reported by Drs. FRANK C. WILSON and J. A. LARRABEE, Publishing Committee. (Abstracts).

Dr. Wilson mentioned a case of membranous croup treated by inhalation of oxygen gas. A full report of Dr. Wilson's case will be found in another part of this Journal. Dr. Wilson also reported a case of double pneumonia following measles, in which, after the countenance became livid, and cyanosis was well marked, he commenced using oxygen gas, with almost immediate relief of the cyanotic symptoms. Unfortunately, however, in this case, after the supply of gas was exhausted, there was considerable delay in getting more. In the meantime the cyanosis returned, and when at length the inhalation was recommenced, the patient was too much exhausted to be benefited, and died in a few moments.

Dr. Octerlony believed the matter under discussion—viz., the administration of oxygen in therapeutics, to be not only of great interest, but also of the utmost practical importance. He believed he had been the first to make such use of it in this city, a long time ago, and had no doubt at all in his mind that it had been instrumental in his hands of saving human life. Even during the present week he had used it in pneumonia with similar result. The case was as follows:

Double pneumonia with complete solidification of the left

lung. The patient grew from bad to worse, until he could be fairly considered *in articulo mortis*. His pulse was small, irregular, and could not be counted; respiration 60 per minute. The extremities were cold; he could not swallow medicine. In this stage oxygen gas was ordered and administered; in a few moments a general improvement became manifest. The extremities became warm; the low delirium which had been present gave way, and although he is still under treatment, the right lung being at this time impervious to air, Dr. Octerlony regards his life saved by the prompt and timely inhalation of the oxygen gas. In the treatment stimulants were used, whisky and carbonate of ammonia; beef-tea was also given freely.

Dr. Child then read the following paper upon Oxygen, and opposed its use in obstruction of the air passages in membranous croup:

"The result of clinical experiments is conclusive if such results follow in a number of carefully observed cases, but is of course likely to lead into error if a conclusion be drawn from a single instance.

"Oxygen administered to Dr. W.'s patient seemed to afford great relief, but I cannot conclude that amelioration of symptoms was due to the remedy used. The subsequent recovery of the patient was, I am persuaded, owing to the employment of the other measures mentioned.

"It is well known that croup is characterized by remission in the severity of its symptoms, particularly in the dyspnœa that accompanies the disease. Frequently simply a warm bath will relieve the difficulty of breathing when mainly due to spasm of muscular structure of the larynx. But the slow suffocation that causes death in croup is brought about not by the spasmodic condition of the larynx interfering with the proper æration of the blood, but by the lessening or obstructing of the air passages due to the hyperæmic or œdematous condition of their lining membranes and the presence of the peculiar deposit styled pseudo-membrane.

"Neither is this slow approaching asphyxia caused by a

want of oxygen alone, but by the retention of carbonic acid in the circulation. It is true, there is a lack of oxygen in the blood, but supplying that want does not eliminate the compound of oxygen and carbon, carbonic acid in other words, which is in excess in the blood, and is killing the patient. Oxygen does not neutralize the effects of carbonic acid. We all know that the change of color in the blood which takes place when air or oxygen is respired is said not to be due to any reaction between oxygen and carbonic acid, but to a change in the form of the colored corpuscles of the venous blood by absorption of oxygen. Dr. Reese, Professor of Toxicology and Medical Jurisprudence in the University of Pennsylvania, remarks, in his small work on physiology, 'It is not so much the want of the introduction of oxygen into the lungs as of the excretion of carbonic acid from them that proves the source of difficulty in asphyxia; this latter agent seeming to exert a directly poisonous effect upon the system if not properly eliminated.' The same idea is found in other works on physiology.

"Then oxygenation is not equivalent to æration. Oxygen supplies a want in the blood, but it removes no carbonic acid, rather it increases the amount already in the poisoned circulation. Æration removes this poisonous compound. How? By the act of perfect respiration, the blood in the lungs, every part of it, is brought in such position to atmospheric air that transfusion or osmosis of the carbonic acid immediately takes place, and it is carried out in the expired air. But if there is any obstruction in the air passages, any preventive to a proper performance of the respiratory act, causing only partial inflation of the lungs, partial æration of the blood, slow suffocation, such as destroys patients with croup, is the result. Oxygen removes no embarrassment of the passages to the lungs, does not enable the patient to inflate his lungs any more fully than before its use; therefore, does not assist in getting rid of the carbonic acid.

"Further, I think oxygen is an agent which will not only do no good in croup, but may do much harm, owing to its positively poisonous properties. In proof of this, I here quote what

Dr. Christison says of this gas: 'Of all the narcotic gases, none is more singular in its effects than oxygen. When breathed in a state of purity by animals, they live much longer than in the same volume of atmospheric air. But if the experiment be kept up for a sufficient length of time, symptoms of narcotic poisoning begin to manifest themselves. For an hour no inconvenience seems to be felt, but the breathing and pulse then become accelerated; a state of debility next ensues; at length insensibility gradually comes on, with glazing of the eyes, slow respiration and gasping; coma is in the end completely formed, and death ensues in the course of six, ten, or twelve hours. *If the animals are removed into the air* before the insensibility is considerable, they quickly recover. When the body is examined immediately after death the heart is seen beating strongly, but the diaphragm motionless; the whole blood in the veins, as well as the arteries, is of a bright, scarlet color; some of the membranous surfaces, such as the pulmonary pleura, have the same tint, and the blood cogäulates with remarkable rapidity. The gas in which the animal has died rekindles a blown-out taper. These experiments, which physiology owes to the researches of Mr. Broughton, furnish a solitary example of death from stoppages of the respiration, although the heart continues to pulsate and the lungs to transmit fluid blood. Death is probably owing to hyper-arterialization of the blood.'

"It will be seen from this that oxygen is not only poisonous when breathed exclusively for a few hours, but from its tendency to stop the action of the diaphragm and to embarrass and check respiration, it might readily bring about a fatal termination in croup. DUFF. CHILD."

Dr. Satterwhite, President, had been delighted by the favorable reports of the different gentlemen upon the use of oxygen gas in croup, and was only too glad to hope that by its use we were armed with a potent weapon against this terrible scourge of childhood. But Dr. Child's paper was calculated to check his joy in this direction, nevertheless he thought it better to discuss both sides of so important a question.

Dr. Brandeis spoke at some length upon Dr. Child's paper. The patient should not be required to breath oxygen alone, but merely a greater proportion of oxygen, one nostril being left open for the admission of air. He was in the habit of giving five or six inhalations and then stopping for a moment. Under this treatment he had had the satisfaction of seeing his own child recover from an otherwise fatal collapse from peritonitis. He believed that in the future we should have more to do with oxygen in therapeutics.

Dr. Brandeis also reported two cases of measles in which the eruption, after lasting eight days, faded, leaving dark spots which appeared to be permanent. To one of these cases, a little girl in this declining stage of the disease, he was called suddenly, and found her comatose, with frequent labored respiration, livid color, etc. He would have used oxygen in this case if he could have obtained it with confidence of success, and he believed she had to die for the want of it.

Dr. Sale had used oxygen in a case of poisoning from an overdose of chloroform, taken internally by mistake, the amount taken not being known. The symptoms were relieved, and the patient recovered.

Dr. Child believed that he was misunderstood; he considered oxygen, properly administered, to be a tonic, and would not object to its careful use, but he only differed with the gentlemen in this, that it should not be used in croup or in obstruction of the air passages. The lungs already filled with carbonic acid, which is needed to be eliminated, cannot expand enough to permit æration of the blood.

Dr. Holland thought Dr. Child was not fully understood. In obstruction of the air passages there is deficient inhalation and exhalation, now if pure oxygen is inhaled there is more waste and more carbonic acid formed than can be eliminated, as would occur in croup. He did not understand from Dr. Child that it was contra-indicated in pneumonia or peritonitis.

Dr. Goldsmith agreed with Dr. Holland in his explanation of Dr. Child's position. He had had no experience in the thera-

peutic use of oxygen, but thought the explanation of unequal proportions of these gases in cases of obstruction was plain.s He had been unfortunate with croup in his own family years ago, when in consultation with the foremost of the Profession calomel and emetics were relied upon. Since he had used oxydizing agents, stimulants and supporting treatment he had been more successful.

Dr. Morton suggested that perhaps a difference in volume of oxygen free, and when combined in carbonic acid might favor the elimination of the latter.

Dr. Holland stated that when nitrous oxide is inhaled, the tissue change is quickened, and the accumulation of carbonic acid in the blood produces narcotism, even though there be an excess of oxygen.

Dr. Octerlony, referring to his case of apnœa, remarked that the blood was suffering for want of oxygen, venous blood circulated in the brain, and asked what could be a plainer indication for treatment than to supply the deficient material, be that what it may. Dr. Octerlony had treated, in all, six cases where this was the indication, and with uniformly good results. He referred to the case of a relative where the extremities were cold, the breath cool to the hand placed over the mouth, the lips livid, and dissolution rapidly progressing. Under a few inspirations of oxygen, the extremities became warm, the breath lost its coldness, the lips regained their redness, and the pulse rose in volume. It makes little difference as to theory, so we have good results, and certainly these facts are the best testimony.

In reply to a question, Dr. Octerlony stated that he had never used it in croup or where there was any obstruction to respiration. In the case of Dr. Brandeis's son, the effusion from peritonitis had compressed the lung, the child, however, recovering rapidly after oxygen was given. He thought there was some analogy between these cases, in croup the obstruction is at the rima glottidis, while in the other it is due to compression of the lung.

Dr. Gaillard had been much interested in the debate upon oxygen. He was fully satisfied as to its valuable therapeutic effects; aggregate observation, experience, and testimony placed its value in fact beyond dispute. The objections made to the use of oxygen were chemically and physiologically illogical and erroneous. The results quoted by Dr. Child, in regard to the experiments performed by the accomplished Christison, were evidently due to the poisoning of the animals by the carbonic acid gas *expired* by them; they suffered, just as animals must suffer where carbonic acid gas accumulates in a room; and they were relieved, evidently, because when removed, they were removed into an atmosphere uncontaminated by accumulated carbonic acid gas. The experiments of Dr. Andrew Smith, of New York, demonstrate that where provision is made for the prompt removal of carbonic acid gas by exposing a solution of potash in the chamber, (with dilute nitric acid to take up the ammonia, and chloride of calcium to absorb the moisture), that an animal can breathe even pure oxygen gas with impunity. Hyper-oxygenation of the blood is thus manifestly impossible; the blood can absorb only so much oxygen gas and no more. There can be no hyper-oxygenation of the blood, and consequently increased formation of carbonic acid gas is impossible. Oxygen gas can not hyper-oxygenate the blood, and can not therefore increase the quantity of carbonic acid gas in the blood. Christison's views represent the best opinions at that time, but, with our present knowledge, they are manifestly and demonstrably untenable. In croup with false membrane, the patient suffers not from asphyxia, poisoning by carbonic acid gas, but from apnœa, a want of oxygen, (nitrogen subserving only the purposes of phonation). Oxygen gas artificially furnished supplies fully this want; it is curative of such a pathological condition.

Whenever respiration is frequent and shallow, or whenever it is too infrequent, even though deep, the patient suffers from absolute or comparative apnœa; from a want of oxygen. Under all such circumstances, oxygen gas supplies fully an absolute want. Its value is unquestionable. It gives results which can

not be otherwise obtained. The brain and spinal cord resume their duty, and all the functions become normal; especially does it regulate the functions of the great head of the circulation, the heart; its quick irregular beating becomes natural. Oxygen really corrects the conditions spoken of by Dr. Child.

Dr. Satterwhite reported a case of measles followed by double pneumonia with typhoid symptoms. The patient was extremely low, so much so that no hope of his recovery was entertained by his friends, and but little by his physician. He hardly breathed at all, the surface of the body was purple and cold, and he could not swallow medicine or food. Dr. Satterwhite, in this stage, determined to try oxygen gas, and invited Dr. Brandeis to be present and assist in its administration. The gas was inhaled from 9 to 10 A. M., during which time the pulse, before not perceptible, rose so that it could be counted, and a general and corresponding improvement was noted, the eyes becoming animated, and the extremities warm. Three hours after he remained much better, and again in the evening his pulse was tolerably full, and the general aspect of the patient so much better that it was thought unnecessary to use more oxygen, so that the apparatus was sent home. At 8 A. M. he found the patient back in the same condition, and after some delay obtained and tried the oxygen again, but failed to revive him, and in a short time he died. Dr. Satterwhite could not help blaming himself for not continuing the oxygen treatment longer.

Dr. Gaillard would like to hear from Dr. Satterwhite what he judged to be the cause of the alarming symptoms and speedy death, was this from measles poison, or from the pneumonia, or had the child recovered from the pneumonia?

Dr. Satterwhite thought the death caused by the poison of the measles, together with the pneumonia, and diarrhœa, (green stools).

Dr. Wilson asked if there was any change or improvement in the character of the stools. The reason which prompted this question was that oxygen acts powerfully on the the capillary system of the circulation elsewhere, and if it has the same effect

upon that of the mucous membranes, it would be indicated by a change in the character of the stools.

Dr. Child remarked that years ago oxygen had been used in almost all diseases and after a fair trial given up by the Profession generally.

He thought it might be useful at times, but an unmanageable remedy, and liable to form products in the body not easily eliminated. He regarded oxygen as a diffusible stimulant.

Address of Joseph A. Graves, M. D., President of Dallas County (Ala.) Medical Association.*

Gentlemen,—Again we have assembled as fellow-laborers in a common cause, to promote the best interests of our Profession by accumulating facts that will enable us to establish more correct principles for the government of our future practice; by soliciting a free interchange of opinion upon such subjects as may arise, and for strengthening the ties of a common brotherhood.

As practitioners in the midst of an intelligent people, among whom much of the ordinary routine, and many of the common principles of daily practice are understood and acted upon without professional consultation, it is but too evident, that for a physician to take rank either with his professional brethren, or in the community in which he lives, requires much labor, patient research, and professional observation.

The light which has been thrown upon the many abstruse points in physiology, only demonstrates the necessity of a more thorough understanding of them to the attainment of a proper knowledge of pathology, without which our applications of therapeutics will necessarily be empirical. While the chemist, in untiring and persistent labors, has done much for the advance-

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* At the regular semi-annual meeting of the Dallas County Medical Association, held at Selma, Ala., November 14th, 1871, the accompanying remarks of the President were, by a unanimous vote of the Association, approved and ordered to be sent to the "Richmond and Louisville Medical Journal" for publication. A. A. Alston, M. D., Secretary.

ment of medical science, there yet remains much to be done, and so intimately connected is this science with medicine, that he who neglects it may be said to be totally unable to appreciate the changes which are continually going on in the system in health, and which are so necessary to a proper understanding of the pathology and treatment of disease.

For the better attainment of the objects contemplated, committees have been appointed to report upon the prevailing diseases in different parts of the county, with peculiarities of type, modes of accession, etc., and remedies which have been found most effectual in controlling the same. Committees have also been appointed upon other subjects of especial or growing interest, with the view of eliciting all the information upon them attainable. It is expected that these committees will be prepared to report, as upon the faithful discharge of duty rests all hope for the interest or prosperity of our Association. It is thus seen that our endeavor is to promote the welfare of those in the midst of whom we live, and in order to the successful prosecution of our labors, there should be harmony among ourselves, not only of action, but of thought and feeling. Whoever depreciates a brother's professional acts that he may thereby add to his own reputation, deserves the censure of every good citizen, and forfeits all claim to professional recognition. And he who, for pecuniary gain or professional emolument, would lower the standard of professional attainment or honor, must be regarded as an enemy to the cause of humanity.

There has been much feeling manifested with regard to the Mobile College giving their lectures gratuitously, which seems to have originated principally upon the ground of its being understood that they have the endorsement of the State Association, which, of course, includes the approval of this Association also, while the almost unanimous sentiment of the Profession in this section of the State condemns their course. However much such a step may contribute to the interests of any particular locality or school, or the students attending the same, it certainly can be of no advantage to the Profession at large, and must

be regarded as lessening the self-sustaining portion of the Profession. If with the giving of those free lectures our Mobile brethren will conjoin a more thorough system of medical education, a higher standard of professional attainment, and more rigid examinations and requirements for graduation, then we will accord them the credit of philanthropy.* But, be this as it may, their course is endorsed and approved by the State Legislature, and any attempt upon our part to legislate upon the subject, would be useless in the extreme. The farce of attempting to legislate upon subjects, with neither right nor power to control, has been sufficiently demonstrated in the acts of the American Medical Association. We have the right to decide the qualifications and requirements of membership with us, and there our authority, as an Association, ends. And it certainly appears not only impolitic, but unjust for Medical Colleges, in their collegiate capacity, to be allowed representation in Medical Associations such as we have, however much it might be desired for their professors to participate either as individual members or as representatives of local societies.

By reference to the last proceedings of the State Association it will be seen that a new constitution is proposed for the government of the Profession throughout the State, and as it will only be a few months before the State Association meets again, and you may, perhaps, have a voice in its adoption or rejection, it would be well to consider some of its leading points.

Firstly, there is contemplated a State organization, supervisory and supreme, local organizations being only accessory and subordinate. These, with their boards of censors, are to determine the qualifications of all applicants for practice, granting or denying the same as they may find them worthy or otherwise; and that none be permitted to practice medicine without their certificate of approval. It contemplates the suppression of quacks and patent medicines. It is also intended to petition for

* Justice to the Mobile College requires us to state that it is not intended in these remarks to insinuate that her standard of requirements for graduation is less than with her sister colleges.

Legislative enactments to make their decisions in these respects authoritative.

The policy of the Government has ever been to throw open the doors as wide as possible within her borders for all competition. All schools or sects, under whatever name or hypothesis they may originate, desiring to grant diplomas to practice, have ever found permission readily accorded them. The innate propensity in the human heart, among high and low, rich and poor, educated and illiterate, to accord and seek a specific for every human ill, affords to every secret nostrum, however extravagant its claims and pretensions, abundant victims.

However laudable the contemplated objects may be, any attempt to seek through Legislative enactments the suppression of the sale of patent medicines, or to so far control the Profession as to allow none to practice but such as are permitted by a board of censors appointed by the Profession, would be attributed to mercenary motives, and if granted could be readily made to subserve pecuniary objects, and the Legislature would most assuredly reject, unless it be accompanied with such requirements as would materially impair the liberty of the Profession. So all popular legislation would only tend to embarrass and not benefit the Profession, its object being to remove all barriers to professional aspirants, and not to create them. On these grounds I would recommend the rejection of the constitution as proposed, and the adoption of no other until it is first revised and submitted for your examination.

The question naturally presents itself, what can be done for the interests of the Profession? In order for legislation to accomplish anything towards the removal of evils that exist, will not only require that the Government see and feel the necessity for action, but it will be necessary that the governing power shall be in hands from which it cannot be transferred; aloof from all political parties and intrigues, and having for its object solely the public welfare; must appreciate the necessity, not only for the perfecting, but the protection of the instrumentalities through which it is to be accomplished.

Under any other circumstances, Legislative interference, beyond what will enable the physician to collect legitimate fees, will only tend to the detriment of the interests of the Profession, and it will be far better to rest content with uniting ourselves for mutual aid and recognition; for elevating the standard of professional honor and attainment, and encouraging scientific research; making a proper use of our inherent right to dictate conditions and qualifications for membership with our Association.

The Central Kentucky Medical Association.

This Association held its third regular meeting at Stanford on Wednesday, 18th of October, in the Odd Fellows' Hall at 10 A. M. After a few words of welcome from the President, Dr. Spilman, the debate was opened by Dr. A. R. McKee, with an excellent paper on "Fractures of the Long Bones, their Nature, Diagnosis, and Treatment," which was followed by an animated discussion as to the best method of treating this class of fractures.

Dr. J. D. Jackson read an interesting paper on "Loose Cartilages of the Knee-Joint," with a case, and removal, followed by recovery, exhibiting the body extracted.

Dr. H. Brown read a report of a case of "Entero-Vaginal Fistula."

Dr. R. W. Dunlap reported verbally a case of "Uterine Hæmorrhage," recurring every seven days. The periodicity, the only point of interest in the case, gave rise to considerable discussion.

Dr. Hunn reported verbally a case of "Paralysis of the Bladder, Sphincter Ani, and Right Leg in a Boy," the result of an injury received in falling from a wagon, the boy falling and striking himself on the wheel over the last lumbar vertebræ.

Dr. W. B. Harlan exhibited a case—the patient present and exhibited in person—of "Progressive Muscular Atrophy." The patient, a man thirty years of age, married, and the father of several children, presented the prominent characteristic phe-

nomena of this disease, a wasted and flattened appearance of the muscles, "*main en griffe*," loss of use of both arms, so that he has to be fed, though the atrophied muscles still respond to the galvanic current, fibrillary contractions of the muscles, etc., etc. It began four years ago with a sensation of numbness in the left thumb, and has progressed uninterruptedly. The fibrillary contractions being now beautifully shown over some of the trunkal muscles, and those of the thigh especially. A point of interest in the case is, that there has been no diminution in the sexual vigor.

Dr. J. D. Jackson, exhibited the uterus of a girl fourteen years old, showing five small ovarian cysts, in various stages of growth, the largest not being larger than a bullet.

The membership was increased considerably at this meeting, and the attendance was unusually large—Garrard county being well represented. Much was added to the enjoyment of the day by an ample repast, and the hospitalities otherwise given by the members of the Lincoln County Medical Society.

The next meeting will be held at Lancaster on the third Wednesday in January next at 4 o'clock P. M. Subject for the regular debate—"Syphilis." Dr. Huffman, of Lancaster, to open. GEO. T. ERWIN, M. D., Secretary.

MEDICAL ASSOCIATION.

The regular monthly meeting of the Pulaski County Medical Society, Arkansas, was held at the office of Dr. P. O. Hooper on the evening of the 2d instant—Dr. R. G. Jennings presiding. The Minutes of last meeting read and approved. The subject of diphtheria or pseudo-membranous croup? a disease now prevailing among the children in the city, was freely and fully discussed, and remedial agents suggested. It was considered a very serious disease, and has baffled the skill of the Profession throughout the country.

After other business of minor importance, the President announced that this was the meeting for the annual election of officers, which resulted as follows: President, William Thomp-

son; Vice-President, S. C. Murphy; Recording Secretary, E. Cross; Corresponding Secretary, D. H. Dungan; Treasurer, R. G. Jennings.

The following preamble and resolution were offered and adopted:

Whereas, the Medical Profession of this city are not exempt from prompt payment for all articles purchased by them; and whereas it has been the practice of many citizens to delay indefinitely the settlement of medical bills, it is therefore

Resolved, That hereafter all medical bills are due and payable at the termination of each case treated, or at the end of the month.

The meeting then adjourned till next regular monthly meeting.

Meeting of the Virginia State Medical Society.

At the late meeting of this Society, Dr. A. M. Fauntleroy, of Staunton, was elected President for the next year, and Staunton selected as the place for meeting.

Dr. R. S. Payne, of Lynchburg, the retiring President, delivered an interesting address.

Dr. Thebault's "Essay on the Malarial Fevers of Eastern Virginia" will be read with great interest.

Dr. Claiborne, of Petersburg, read an essay on "Dysmenorrhœa."

Dr. Fauntleroy made a report of the epidemics in the Valley of Virginia.

There was a banquet given at the Norvell House by the Lynchburg Medical Association, when the death of Dr. Maupin, Professor of Chemistry at the University, was announced. When, after suitable resolutions to his memory were adopted, the members retired from the banquet-room. Dr. Maupin was fatally injured by jumping from a carriage while the horses were running away in returning from the Fair Grounds. He was a delegate to the meeting of the State Society. His sad accident greatly marred the pleasure of the meeting. He is a great loss to our State and to the science of Chemisty.

The Society will meet next year at Staunton, Va.—*Ex.*

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Rusk County, Texas, November 27, 1871.

To the Editor of the Richmond and Louisville Med. Journal:

I have a specimen of morbid growth in my possession, of whose nature I am very doubtful. As there has been quite a discussion here as to its nature, I submit a description of it to your Journal, hoping that we may be enlightened on the subject through its pages.

On the 1st of the present month I was informed by Dr. Beall, of this county, that he would perform the operation of ovariotomy on a patient of his, and he requested my presence; I availed myself of the opportunity, and met him at the appointed time. The patient was a young unmarried lady, Miss P., aged twenty-two. She gave the following history: Six years ago she received a kick from a young colt in her left side, over the region of the spleen. She suffered but little from the injury, and in a week afterwards was quite well. Six months after this accident a small tumor appeared in her side, the size of billiard ball, quite movable, and entirely free from tenderness. It remained this size until last January, when all at once it commenced increasing very rapidly. On examination, she was found as large as a woman at full term of utero-gestation. The apex of the tumor projected up towards the umbilicus, giving the abdomen a pyramidal shape, whilst its fundus rested deep down in the left iliac region. She suffered greatly from dyspnœa and constipation, and menstruation has been more or less interrupted for the last year. Her spleen was found greatly enlarged, which was attributable to prolonged intermittent attacks. There was no fluctuation over tumor. The operation being insisted upon by the patient and parents, ovariotomy was accordingly performed. Drs. Eskridge, McDowell, and Tucker being present, an incision three inches in length was made in the linea-

alba, between the umbilicus and pubis down to the tumor. In order to introduce a hand into the abdominal cavity, the incision was extended two inches upwards, until it reached a half inch above the umbilicus. The tumor was now freely exposed, and its surface found free from adhesions. In examining its under surface for the supposed pedicle, it was found attached solely to the omentum and intestines by a broad, thin, webb-like band, extending the entire length of the tumor, this being proved afterwards to be fifteen inches. The tumor was now taken out and easily stripped of its attachment. A few small arteries were ligated, and omentum returned to the abdomen—one or two ounces of blood were sponged out, and the external wound closed by five silver-wire sutures. The weight of the tumor was $7\frac{3}{4}$ pounds, 15 inches long, 7 broad, and 5 thick. The membranous lining was exceedingly tough and resisting. Internally, it presented a sort of hæmatomatous appearance as to color, very much resembling the spleen, and breaking down easily under pressure from the finger. It was remarkably rich in veins, some of them being large enough to admit a moderate-sized quill. The patient bore the operation admirably; not five ounces of blood were lost up to the present writing. She is able to sit up in bed, with every prospect of a speedy return to health. So far she has had no signs of peritonitis, nor even fever. I have searched in vain for a description of this curious tumor. I suspect it is malignant, and therefore likely to return. I shall watch the case in future with interest, and if there is a disposition to return, I will apprise you of it.

CHARLES BROOKE, M. D.

NOTE.—It is difficult at all times to accurately classify such tumors even after the closest examination, but without examination a moderately correct opinion is almost impossible. From the description given, this growth seems to correspond closely to the fibro-sarcomatous tumor of Lebert. It is worthy of the closest microscopic investigation, and ought to receive this.—ED.

LOUISVILLE, 1871.

Dr. E. S. Gaillard:

I was called, July 24th, to see Mrs. G., who, while eating

corn for dinner, laughed heartily, and a grain passed through the glottis into the trachea. Its presence gave rise to severe and continuous coughing; the forced expirations of coughing caused the corn to rise into the neighborhood of the glottis. Passing my finger into the fauces, she made an effort to vomit, and succeeded in ejecting a quantity of glairy mucus, in which was the grain of corn. After this the coughing and all disagreeable symptoms ceased.

HAMILTON GRIFFIN, M. D.

NOTE.—It would be interesting to know whether this grain was ejected during the act of vomiting, or whether (after the vomiting) it was expelled by the coughing so usually succeeding the act of emesis. Most physiologists claim that the rima glottidis is closed during the act of emesis, and that, unless this closure is established, the act of emesis is impracticable. If their claims be correct, how was this grain expelled during the act of emesis? Can any substance below the rima glottidis be expelled by causing the patient to vomit? Do emetics enable or cause patients to expel false membranes, etc., by the actual forces brought into play during the act of emesis, or do they, as nauseants, tend to dislodge such foreign substances, and after the succussion, produced by vomiting, enable them to eject such substances by the usual and subsequent cough? If the rima glottidis is sufficiently opened to admit the passage outwardly of a foreign substance, would not emesis become impracticable? It is an interesting question. Testimony from experts is conflicting. Can further vivisection not decide this important matter? It is a question governing the practical effect and importance of emetics, as contrasted with the effect and importance of nauseants, when the dislodgment of foreign substances from the respiratory tubes becomes necessary or desirable.—ED.

VALLEY P. O., GAUDALOUPE COUNTY, TEXAS, 1871.

Dr. E. S. Gaillard:

You find with this letter a photograph of the boy who had his hip shattered by an accidental bullet. Extensive suppuration, and finally caries ensued. Dr. George Cupples, of San Antonio, whose aid was called only very late, and who had to operate under very unfavorable circumstances, exarticulated in the hip-joint, and removed about *seven* inches of the thigh bone. I got this picture from him for the purpose of sending it to you. It was taken some months after the operation. The leg becomes daily more useful to the happy owner.

Another interesting case is the following: A poor woman, young and healthy, had by the kick of a cow both bones of the leg broken. She lived twenty miles distant from myself, the nearest surgeon, and I only saw her the day after the accident. There were no extraordinary symptoms; plain splint-dressing, and afterwards, all swelling having disappeared, pasted rollers; when removed, nine weeks after the accident, the limb was of regular form, but without the least sign of reunion. Dr. Cupples saw her, and cutting along the tibia, laid it bare, and told me the fracture appeared as if it had only happened a few days before. He bored three holes through the fragments, and drove in three ivory spikes, (after Dieffenbach's plan). The wound healed in a short time, mostly by first intention. In nine weeks the leg was perfectly restored. After this I heard of two more cases where reunion took place after more than six months, but there was no operation performed.

FELIX BRACHT, M. D.

WHITEVILLE, TENN., 1871.

Editor of the Richmond and Louisville Medical Journal:

In the May number of your much prized Journal, under the head of "Original Communications," article third, page 502, Dr. V. E. Kersh, of Relf's Bluff, Ark., treats your readers to a case of "poisoning by strychnia." He no doubt prepared his article in great haste, and failed to note down some very important items in his case, the want of which prevents one from arriving at any definite conclusion in regard to the matter. Physic is by no means an exact science, nevertheless, physicians, in communicating their rare cases to the journals, should be very careful to give a full statement of every thing of importance connected therewith. The Doctor, in this case, has signally failed in several instances to enlighten his readers on important points, and has no doubt left the impression on many that perhaps he was mistaken, and that his patient was not poisoned by strychnia at all.

Let us review his case, and see what difficulties his readers

must all rest under. The patient applied to him about the 1st of October '70; had sun-stroke or something like it eighteen months before; had suffered from left hemiplegia ever since; had malarial fever when the Doctor first saw him. Now we would like to know if he did not suffer more or less from malarial fever about the time he had "sun-stroke or something like it"; if so, how often did this fever recur—in two, three, or four weeks? What treatment had he during these eighteen months, and did he not have tetanic spasms at the time he had sun-stroke?

The Doctor put him on the use of a first-rate tonic pill containing one-fortieth of a grain of strychnia. We are left to guess at the time he commenced taking this pill. As soon as febrile excitement subsided, he commenced with the tonic pill. Well, I guess it was by the 7th of October, or may be a few days before. Under the use of this pill, the patient greatly improved. We would like to know *when* he was greatly improved—the first, second, third, or fourth week? I guess his improvement was gradual up to the end of the fourth week, when he was "thrown into fits" by taking tobacco and strychnia, "of an of." If his improvement was gradual, it proves that the strychnia was duly assimilated, and could not have been stored away, in some remote corner of the system, to exert its cumulative effect in conjunction with the reinforcement from the quid of tobacco, when the old gentleman fell into fits.

November 7, 8 P. M., the Doctor finds the patient without pulse, tetanic spasms, etc., etc. Prescribed 60 drops laudanum in ℥ss. camphor water every half hour, until symptoms abate. I guess he took twelve doses, as he got better about 2 o'clock A. M. on the 8th—that is 720 drops of laudanum to about 30 grains of opium. We would really like to know how much laudanum the patient took before he was relieved, for I frequently give my patients strychnia, and should any of them have alarming symptoms, I wish to be posted in regard to remedies?

By the 10th the patient was doing well; was placed on a sup-

portive plan of treatment. We would like to know if there was any strychnia in this supportive plan? Guess there was. We are then informed that the convulsions returned on the 10th of December, just one month after he was placed on the supportive plan. And he fails to inform us whether or not the old man used any of that tobacco mixed up, in his pocket, with peanuts and strychnia. And we would like to know if this second attack was as urgent as the first? We guess it was not, as the Doctor merely prescribes, in conjunction with his supportive treatment, 7 or 8 grains bromide potash three times daily. Bromide potash is a good medicine. We doctors down here always prescribe it when we don't know what ails the patient, and it always acts like a charm.

I would like to know if the old man, in chewing tobacco, swallows the juice of the weed—some persons do? If he does not swallow it, I would ask (seriously) what proportion of the strychnia would probably be absorbed by the mucous surface within the mouth during the chewing of a quid of tobacco.

Respectfully, A. P. Waddell, M. D.

Winchester, Ill., November 8, 1871.

E. S. Gaillard, M. D., Louisville, Ky.:

Dear Sir,—As I have seen your Medical Journal spoken of in high terms, but have never had the pleasure to see and examine a copy, would be pleased to receive a copy; and if it gives satisfaction, I will subscribe for it. Address

Dr. ———, Winchester, Ill.

P. S.—Do not know price of single number, or would enclose same.

Note.—This is a specimen of countless similar letters received by journalists. There are a number, and a large number, of swindlers who obtain twelve Journals every year by paying thirty-six cents in postage stamps, and writing one letter every month. Each journalist being thus swindled in turn. These men never know the price of a Journal, though they are otherwise familiar with it. They are professional beggars, or swindlers. The name of this man is suppressed. Such swindling must be corrected by exposure.—Ed.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—CANCER—ITS CLASSIFICATION AND REMEDIES. By W. BRIGHT, M. D., Lexington, Ky. Published by S. W. Butler, M. D. Philadelphia. 1871.

This is an octavo work of fair size, published in Philadelphia, and written at Lexington, Ky. The publisher has issued the work very creditably. It is pleasing to welcome in the field of medical literature authors from the South. For many reasons not improper to be partially analyzed here, it is seldom that Southern physicians occupy the relations of authorship to the medical Profession. They are accomplished; men of the best judgment; skilled in both the science and art of medicine, and yet it is seldom indeed that they become authors. Americans have not, even yet, outlived the habit of looking to Philadelphia and New York as the exclusive centres of medical education and medical erudition. Enjoying, as these cities did, the advantage of being the sites of the first American Medical Schools, their prominent physicians were naturally made more prominent, and became confessedly teachers and authors in medical science; though medical colleges have been since established in Boston, Baltimore, Cincinnati, Richmond, St. Louis, Louisville, Chicago, Nashville, New Orleans, Charleston, Savannah, Mobile, and many other cities of equal or lesser note, the old habit among Americans of looking to Philadelphia and New York for medical inspiration and instruction measurably exists even to the present day. While students are equally well instructed in most of the cities named, and in others not specified, the lessons of the past are still conspicuously manifest in the history of the present. No one doubts but that at any or all of the localities named, and in hosts of localities not named, there are very many physicians who enjoy all of the requisites for successful, reliable and efficient authorship, but tradition,

custom, habit, all tend to foster the usages of past generations; American students, whether graduates or not, are still prone to accept with complacency and confidence the teachings of those who breathe the inspiring atmosphere of the Delaware or Hudson rivers, while they eye with suspicion and reserve the productions of all dwelling exterior to these sacred precincts. As the result of these causes, and others unnecessary to mention, the large publishing Houses of America give an admitted preference to authors resident within these hallowed areas, and the authors preferred are prone to believe that they are the very mirrors indeed of modern medicine. Like Paracelsus, they often intimate, (in spirit, if not in words), the familiar lesson, "Athenian Arab, Greek and Jew, you shall follow and obey me; I am your king; the monarchy of physic is mine." What is remarkable, there is a disposition still among myriads in America to render to these conspicuous pretensions a blind allegiance; and very many are ever ready and prone to bow down before this sceptre waved so often in satire and derision. That there are many exceptions to those asserting such claims, and very many exceptions to those yielding to such claims, it is true, but the historian is not frank or true who fails to see and state that many in a few cities in America are prone to believe with Paracelsus "the monarchy of physic is mine." Nine-tenths of American medical works are written in these few cities, and more than this proportion of medical works are published in these cities. Under such circumstances, it is welcome to see a medical work from an author dwelling in the comparatively *terra incognita* of medical authorship. Boston thinks New York "fast" and fussy in medicine; New York thinks Boston often fanciful and always "fogyish"; while Philadelphia thinks Boston and New York striplings and pretenders, the rest of the American world being but babes and sucklings in medical science. It is positively refreshing to see, under such dangerous circumstances, some one beyond these hallowed precincts actually rash enough to believe that he knows something, and actually heroic enough to publish what he believes. There is something especially appropriate,

that this new claimant for professional notice should dwell where he does, at Lexington, Ky.; the site of what was once one of the oldest and one of the best medical institutions in America; "the modern Athens," as this classic old city was termed in its literary and social claims; the American Edinburgh, in its former medical excellence and renown. The American physician should feel, amid the ruins of "Transylvania," as did the disciples of Hippocrates amid the ruins of the Temple of Æsculapius at Cos; he should feel that he is on classic ground; surrounded by holy associations; enriched by the memories of those great ones who have given to medicine so much that secures for it reputation and renown.

Dr. Bright has prepared his work with great care. Much of it is devoted to a brief analytical exposition of the views and treatment of confessed authorities. Indeed, this portion of the work is very valuable, for it enables one, with very little labor, to become familiar with the pathological doctrines and actual management of very many who have been long accepted as teachers on the subject of cancer in its varied manifestations. While for the most part these views are not now accepted as reliable guides in the treatment of cancer, it is yet very desirable to have them briefly, clearly, and aggregately recorded.

Dr. Bright's statement that cancer cells are local strictly in origin, and never become constitutional in distribution or dissemination unless by absorption, will not be accepted by many. Were this the actual pathology of the cancer cell, it would be impossible to escape the conclusion (evidently held by Dr. Bright) that cancer, in its early manifestations, may be cured by timely operation and removal. That cancer can be removed absolutely, few who have carefully studied with an unbiased mind will believe. That many operated upon have lived comparatively long and have died before the disease has manifestly reäppeared, all will admit; but that the disease, after operation, is sure to reäppear, few will deny. In this connection the pathological views advocated by Dr. Bright will not (unless by a very limited number) be accepted. He has reported cases believed

by him to be living witnesses of the truth of his pathological views, but he does not say how long it has been since the operations in these cases were performed, or rather how long it has been since he has dismissed them from treatment, for he prefers caustics as a means of removal. All operators of note have been able to declare that their patients have, after operation, been for a certain period of time apparently well; but few operators of note believe that such patients will escape a return of the cancer.

Dr. Bright's pathological views then will, by most experts, be repudiated, and his conclusions as to the actual eradication of the disease will secure a very limited adoption. His caustic treatment will not be generally approved. Indeed, it is difficult to say if operation is indicated, how the delay of a caustic treatment is to be justified. The caustic treatment is very painful, as a rule, and is certainly not more efficient than the knife. Lister's present treatment, of the knife, with the use of carbolic acid spray (from a strong solution) to destroy all cell development not reached by the knife, seems to give all that can be expected, if not desired, in the treatment of this terrible disease.

Dr. Bright's arrangement is frequently defective in the manifestation of unwelcome repetition, and his diction is often involved and orthographically incorrect, but these errors are not infrequently made by experienced authors; almost always by those inexperienced. They are mentioned not in a spirit of hypercriticism, but that attention may be directed to them, when a new edition of this work is prepared. The author deserves encouragement and success; his volume is really a welcome and useful addition to the medical library, and it is hoped that it will meet with a prompt and liberal support.

Art. II.—Emergencies and How to Treat Them. By Jos. W. Howe, M. D., Visiting Surgeon to Charity Hospital. New York: D. Appleton & Co. 1871.

This work is certainly novel in character, and its usefulness and acceptability are as marked as its novelty. It may be said

by many who are in their own estimation very wise, that it is a good work for students (under-graduates) and young practitioners, but, it must, in all fairness, be admitted that it is equally good for older physicians. According to a popular theory, and in accordance with the views of many who write sentimental nonsense about our "noble profession," older physicians (the senior representatives of our "God-like profession") are supposed to be always ready to meet effieiently all emergencies. As fit representatives of this "God-like profession" (so much prated about by Utopian dreamers and nonsensical rhapsodizers) these older physicians are supposed to be gifted with at least one of the attributes of Divinity—omniscience; or to enjoy at least a decent condition of preparation for meeting most difficulties and emergencies promptly and properly; but the candid historian must be candid; he must dare to detract from the "God-like attributes" of the members of the medical profession; he must place on record the mortifying fact, that in these degenerate days of superficial education and unlimited specialism, there are very few of the Profession who, like "the gentlemanly proprietors" of restaurants and eating-houses, can place over their places of business the imposing and alluring sign, "*Semper Paratus.*" Indeed, if the inquiring and curious desire to have a fair conception of a countenance and expression least gifted with the nobility and imposing air of Divinity, they have only to see very many of the "God-like profession," when they are suddenly called upon "to meet an emergency." Seriously speaking, there is no book more useful in a library than one which will enable the (so called) "busy practitioners" to prepare quickly and fully for meeting the indications in an emergency. Some of our most active, earnest, and hard-working physicians often require aid under such circumstances. It is easy to illustrate this; where, for instance, prussic acid is quickly destroying the powers of life, even the wisest clinicians may have to hold consultation with their drug-clerks to save a life and win an enviable reputation; to cap the capital of that "monumentum æris," which the ancients worshipped and the

moderns so easily decipher. In most emergencies, how many are ignorant; how many doubtful; how many anxious to place their recollections of the truths of science beyond the reach of error or confusion? Pretension says few; candor says many.

What is the answer from the truthful and the really learned? How many need such information, and how many must obtain it (if at all) quickly? What is this number? To all who need such a support, a timely monitor, this book is fully commended. In its pages one finds how to deal promptly and properly with very many emergencies; with all kinds of hæmorrhage; with poisons and the poisoned; burns; scalds; the effects of cold; strangulated hernia; coma; syncope; asphyxia; sun-stroke(?); dyspnœa; œdema glottidis; convulsions; suspended fœtal animation; complications of labor; narcotism; corrosive acids and alkalies, etc. The directions are, in the main, good and reliable, and the instructions briefly and clearly given. The style of the author is terse, concise, comprehensive, simple. The grammatical construction is, it is true, often faulty, but who will reject a pearl, because the containing shell is unpolished or inelegant?

The author has done a good work, and his publishers have, as usual, done fully well. This work is confidently commended.

Art. III.—Odd Hours of a Physician. By John Darby, M. D. Philadelphia: J. B. Lippincott & Co. 1871.

This is a very neat but small octavo; so small that the reader is disposed to think (before reading it) either that the author has been so hard-worked as to have had but few "odd hours" to devote to his pen, or (after reading) that these hours so devoted must have been very odd indeed to have resulted in such an oddity. The style is an unhappy imitation of the dreamy lucubrations of "Ike Marvel," and while it betrays all of the vices of this latter author, it has few of his charms. One feels that the author of "Odd Hours" is a scholar; cultivated, polished, learned; but with this feeling comes one of regret, that he should have adopted the affectations of the pen, rather than its power and its earnestness. The best moral as well as mental organization is everywhere manifest; indeed, Johnson, in his

Rasselas, did not more fully prove to the Prince of Ayssinia that he could not, after diligent effort, find true happiness elsewhere than in his home in the charming valley—that, as a Prince, his actual lot in life was best and deserving of absolute contentment—than does John Darby teach his readers, that their truest happiness is to be found in a peaceful contentment with their respective lots and labors in the world. "Odd Hours" evince that the author has a strong brain, well cultivated; a good heart, blessed with the kindlier and nobler feelings of humanity; but a defective judgment and a bad taste, in selecting the costume of the literary fop as an apparel in which to seek his first audience with that powerful sovereign, the medical public. The ushers have introduced the stranger by a fictitious name.

Art. IV.—"Professors' Quiz."

This is the glaring caption to an imposing placard which has been just received. On examining it further, the dramatic technicality "Programme" meets the eye and prepares the reader for expecting next a list of the "*Dramatis Personæ*"; as if, charitably, to guard him against a disappointment in this connection, the expected list is then furnished. This list does not represent knights of the buskin offering, for the moderate sum of fifty cents, to charm their patrons with due exhibition of the modern drama, but, strange to relate, it presents "grave and reverend seigniors" "billed" for a "Professors' Quiz"; the exhibition being promised for "the entire season." The sum charged for a season ticket to each student (who, like Rutland in Henry VI., cries out in agony, "Sweet Clifford pity me") is thirty dollars. On examining this novel, publication a little further, it seems that the "Professors' Quiz" is made up of professors in the Mobile Medical College, and that the appeal made is to the students of the Mobile Medical College. As this school is advertised as a free school, the reader is inclined to believe that this singular document is an imposition; but he is warned not to "lay this flattering unc-

tion" to his soul, etc.; the bill is no counterfeit; it is an authentic specimen of official currency which has been imposingly and recently issued. There is but one resource for each reader who may at first have determined to play the role of Thomas, by seeking mental satisfaction in persistent doubt; it is to become a Jeremiah in lamentation, or to say, with the Duke of Ephesus, in that appropriate play "*the Comedy of Errors*," "we may pity, but not pardon thee!"

To charge a student a gate fee of $25; a "Professors' Quiz" fee of $30; a demonstrator's fee of $10; and a diploma fee of $30; and then to term the Institution in which this is done a free school, is what a lexicographer would declare to be a misnomer, and legal counsel would urge as a "*non sequitur*." At least, if there is any free element in this school, it is not very conspicuously in favor of the student; it seems to consist in this; not that the students are free to receive all without money and without price, but that the Faculty are free to do as they please, in regard to the collection of every available dollar. They seem to have an original idea of the meaning of the word "free" in this connection, and evidently believe that, with the inspired teacher, they can also say (with no irreverence) "if ye be my disciples, then are ye free indeed." This is about the true character of the free element existing in this Institution.

Dr. Ketchum says: "We ask you for no lecture fee"; and the reason for this is very evident; the amount available is obtained in another way. When, however, he adds: "We are not urged on by expectation of pecuniary reward, we have nobler and more ambitious impulses moving us," it must be confessed, either that he is an inexpert masquerader wearing his mask badly, or that he seeks to be a sublime joker, and wishes to divide with "Mr. Merryman" the plaudits bestowed upon this spangled knight of the saw-dust ring. It is said that the Press has no right to criticise the policy of medical schools; but this is said by those connected with the schools criticised; it is all nonsense. Even granting the claim, however, this brings

no immunity where schools "preach" one policy and practice another. Where a College virtually charges a first-course student $65, and a second-course student $95, and yet does this under the claim of being a free school, whose Faculty is "urged on by no expectation of pecuniary reward," it may be possible for Colleges to believe that the Press should be silent, but a Press thus silent would forfeit the confidence of the Profession.

ART. V.—ANNUAL REPORT OF THE SURGEON-GENERAL OF THE U. S. A., 1871.

The Financial Exhibit seems to manifest an insufficient appropriation on the part of Congress for this department; apparently one of the best, and in its management certainly the best in the Government. It is a relief to know that if the United States Government has stooped to peddling cundurango, that this has not been done through its medical department. The number of artificial limbs so far supplied is over 15,000. The health of the army is not as good as it was a year since, and the mortality has been greater, though the exhibit in sickness and mortality is certainly satisfactory; evincing a due observance of laws reducing the sick and mortality lists. There are now recorded 235,398 surgical cases; the deductions from such data will certainly be very valuable. The army medical museum contains now 15,018 specimens. It was visited by 15,000 persons during the past year. When seen last by the writer, it was in the most perfect order, and was beyond description instructive and interesting. Part first of the Medical and Surgical History of the War is near completion, and will be laid before Congress during its present session. The student of medicine and surgery and the collateral branches will welcome with pleasure this history, for it cannot be otherwise than instructive and valuable. This Report for 1871 is a model; it is concise, clear, and comprehensive.

ART. VI.—INTRODUCTORY LECTURE TO THE MEDICAL CLASS OF THE MOBILE MEDICAL COLLEGE. By G. A. KETCHUM, M. D. 1871.

This lecture evinces a scholarly and most commendable cul-

ture on the part of its author, who is "Professor of the Science and Art of Medicine" in the Institution above specified. The opening of the lecture is devoted to a defense of the policy of this College. In this defense Professor Ketchum alludes to the fact of this policy having been criticised by the editor of this Journal, a "Professor in the Louisville Medical College," etc.

The lecturer is too fair and just to have designedly connected these two offices of the writer; his connecting of them must have been involuntary. No one can justly or truthfully attribute any editorial criticisms to collegiate relations. Such criticisms were made before the existence of any collegiate relations, and though the writer has been connected with several colleges since the establishment of this Journal, the medical public is challenged to find a single instance of laudation of any of these colleges in this Journal; or of unwelcome criticism of any medical college which can be justly or truthfully attributed to his collegiate relations. Before the existence of any collegiate connections, and subsequently to a retirement from all such connections, the criticisms made in this Journal of the policy adopted in many medical colleges was always and uniformly similar to those criticisms made after the writer was connected with medical schools. The Journal stands as a record of these facts. Those who could be unjust enough to ascribe unwelcome criticism of their course to unworthy causes, are referred to the published record for a reply; no other reply is necessary. The effort to emasculate independent and impartial criticism by attributing this to unworthy motives is ingenious, though base, and it cannot be believed that the author of this address could stain his own record by stooping to the use of such dishonorable weapons.

Dr. Ketchum attributes the comparative failure of the Mobile Medical College to "the poverty of our southern country," yet the New Orleans and Baltimore Colleges are full; Nashville is doing fairly; the Virginia and Georgia Schools are sustaining themselves; and in Louisville there are to-day over 400 stu-

dents. He claims that the policy of his College is endorsed by Alabama. This, it appears, is a great error. The Huntsville meeting will decide this. It is unfortunate that this excellent lecture was injured by the discussion of indefensible acts.

ART. VII.—THE CAUSE, COURSE AND TREATMENT OF REFLEX INSANITY IN WOMEN. By H. R. STORER, M. D., LL. B. Boston: Lea & Shepard. 1871.

This little work has just been published, and will meet with a very general welcome. Those familiar with the Transactions of the American Medical Association for 1865, will recognize, after reading Dr. Storer's book, that this is his original Essay, which was published by the Association, and is now presented in a more acceptable form. It is republished by authority of the Association.

The following subjects are prominently examined and presented: The Brain the seat of Insanity, not always its cause; explanation of distant causation; causation often pelvic in women; relations of pelvic causation of insanity; indications of treatment. These subjects are discussed with ability. There is a marked individuality in Dr. Storer's style, which all are so familiar with, as to render illustration unnecessary. It is a pleasure to say that this volume will be read with interest and profit by many. However much some may differ with the author in minor points, in the main they will acoord to him their support. The line of argument is very similar to that adopted by Louis Mayer, of Berlin, in his contributions to the Obstetrical Transactions of Berlin; this last volume having been published since the original publication of Dr. Storer's Essay.

Dr. Storer's work is well issued, and as it is valuable and inexpensive, it will, it is hoped, be generally read.

ART. VIII.—PHYSICIAN'S POCKET RECORD.

This little volume is intended for the habitual use of the physician. It contains a pocket-book, small, but of course large enough for a medical man; a medical diary and account-book;

various arrangements for personal and professional memoranda; a dose-table, showing the doses of medicines, with their properties; a table of antidotes; a table of new remedies, and a convenient calendar, etc. The "Record" is so ruled and arranged as to make it useful as long as a blank line remains. It is well bound, and is furnished with a useful and patent self-closing clasp. It does not contain the usual pencil and pencil receptacle, so convenient and indispensable.

The publisher, Dr. S. W. Butler, of Philadelphia, assumes that the physician should have at least thirty-two patients each week; this is as it should be, and each purchaser will thus see that he has the very best wishes of the publisher, both for his material prosperity as well as his professional case and convenience. The price of the "Record" is $1.50; certainly a reasonable charge.

Art. IX.—The Physician's Visiting List.

A copy of this excellent and familiar little book has been received from the publishers, Messrs. Lindsay & Blakiston, of Philadelphia, Pa. The book is so well known as to render description unnecessary. It is complete in every respect, and combines under one cover a pocket-book, memorandum, and daily register of the physician's work. They are made to suit all physicians; those having not more than twenty-five patients weekly (of course no respectable physician has less than this number) as well as those who are earning a respectable livelihood, with 100 patients per week. There is a calendar, with a toxicological table conveniently prefixed to the volume. There may be some benighted reader who has not seen one of these little conveniences; if so, these facts will induce him to order one with all possible celerity. The prices vary from $1 to $2, according to size.

Art. X.—The St. Louis Medical and Surgical Journal.

Messrs. R. P. Studley & Co., the careful and liberal publishers of this excellent Bi-Monthly, will withdraw from their past relations with it. Drs. W. S. Edgar and H. T. Gill will both

edit and publish the work, and this is to be changed to a monthly journal at $3 00 per annum. They have the best wishes for success. They have a fine field; may they cultivate it well and prosperously. Dr. G. Baumgarten, the active editor of the "St. Louis Journal," retires crowned with the respect and esteem of all who know him and are familiar with him in his late difficult and delicate relations. This gentleman in retiring shoots a Parthian arrow at the writer for his disgraceful want of familiarity with the language of Iceland. The point is conceded. The writer might under some circumstances attempt to parry this Parthian shot, or undertake to return something as a compliment to the Missouri critic, but where one like Dr. Baumgarten enjoys confessedly the profound and varied learning of Humboldt; the metaphysical power and acumen of Locke; a diction rivaling in its purity and force the choicest efforts of Sir Thomas Watson; with a brilliancy and depth of professional acquirement that make him the envy of all physicians, it would manifestly be dangerous to court the unfriendly notice of so distinguished and dangerous an opponent. The writer can only say of the wound received, as did the gentle Mercutio when pierced by the trenchant blade of the sanguinary Tybalt, "'tis not as deep as a well, nor as wide as a church door, but 'tis enough;" adding with sad forebodings as to the mortality of the thrust, "ask for me, and you shall find me a *grave* man." To be charged with an ignorance of the language of Iceland is enough to disgrace any American, but when the charge is made with a satire rivaling that of Mrs. Partington, and a humor surpassing even that of Joe Miller, it is too much for endurance. The writer can only fall and die gracefully.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

On Muriate of Ammonia as a Remedy for some Nervous Affections.—"Muriate of ammonia is one of those commonplace and unattractive substances which we, in this country, are little apt to credit with extensive remedial properties in disease." We quote the first sentence of an eminently suggestive paper by Dr. Anstie ("The Practitioner, December, 1868), which treats principally of the employment of this remedy for the relief of (1) various kinds of pain, and (2) of certain cases of suspended secretion dependent on nervous exhaustion. Before very briefly describing some of the applications mentioned, we think it right to state that we are by no means prepared to coincide in Dr. Anstie's therapeutics, in so far as this is founded on physiological data. Under the first class, the disease termed *myalgia* is said to be specially amenable to treatment by muriate of ammonia. Doses of from ten to twenty grains are recommended, and by their use this disease may be cured as certainly as ague by quinia. This class also includes various neuralgias proper, such as *migraine* (usually referred to disorders of digestion) and *clavus hystericus*, both of which Dr. Anstie believes to be distinct and primary neuralgias of the fifth cranial nerve. Of all the internal remedies that can be employed in these headaches, none is apparently so beneficial as the muriate of ammonia, its virtue depending on its mildly stimulant properties. It should be given in the same doses as for myalgia. In *intercostal* neuralgia, and especially in that form met with in suckling women or in phthisical patients, this remedy is also of great value, frequently "pain being relieved in half an hour." It may also be used with advantage in the milder forms of *sciatica*, which occur in young and debilitated persons; and in that somewhat obscure form of neuralgia termed *hepatic*.

Among the therapeutic actions to relieve suspended secretion, Dr. Anstie expresses his conviction that muriate of ammonia "is the most powerful of all functional restoratives" of suspended bile secretion. He especially recommends it in those cases where the disease is produced by severe and exhausting mental excitement; and mentions that he has seen several instances in which two or three doses of twenty grains have caused a marked recommencement of biliary secretion. All these, and various other therapeutical indications, are founded on the supposition that this remedy is a "pure tonic stimulant" to sensitive and to vaso-motor nerves.—*Edin. Med. Journ.*

Gelseminum.—Dr. E. A. Anderson, of North Carolina, experimented very extensively during the war with the gelseminum, in his efforts to find some agent that would serve the purpose of quinine in intermittent and remittent fevers. He now uses this agent—the gelseminum—almost exclusively in intermittents, especially in children, to whom it is especially adapted, from its absence of any of the unpleasant taste of quinine. He has seldom been disappointed in its effects. He employs the tincture (℥iv. bruised root to Oi. alcohol) or the fluid extract of Tilden. Dose in the proportion of twenty drops to an adult. It should, like quinine, be given before the expected paroxysm; four to six doses should be given before its onset is expected. He says:

"I have found it a reliable agent in intermittent, remittent, and typhoid fevers; acute and chronic rheumatism; in inflammations of the lungs; pleura and pneumonia. I have for several years used it almost exclusively in pneumonia, in place of veratrum, and consider it the best agent in this disease. You can reduce the force and frequency of the circulation with it, as certainly as by digitalis, venæsection, or veratrum, without the distressing effects of these agents, while, at the same time, it allays the morbid heat, restlessness, and irritating cough."—*Journal Materia Medica.*

Copaiba Treatment of Psoriasis.—Henry S. Purdon, M. D., L. R. C. P., Physician to the General Hospital for Diseases of

the Skin, Belfast, publishes an interesting article on the treatment of psoriasis by balsam of copaiba, in which he says the way it was found to possess a special virtue for curing psoriasis may be reported as follows: A patient was admitted to the hospital, suffering with gonorrhœa and psoriasis. As it was necessary to have the former complaint well before commencing the treatment of the latter, balsam of copaiba was ordered, and the result being that not only the gonorrhœa, but also the psoriasis rapidly disappeared. For the past eight months he has used the copaiba in the treatment of psoriasis, and has been able to discharge the patients sooner than under any other treatment, nor have any of them, as yet, had a relapse. *When no acute symptoms are present,* he gives the balsam, giving it with a little liq. potass., mucilage, and water, and continuing it with increased doses, till extensive urticaria is produced.—*Dublin Quarterly Journal.*

Hydrate Chloral Palatable.—The following combination serves to intensify the action of the chloral, and covers the acrid taste:

℞.—Hydrate Chloral, ℥ss.;
Chloroform Water, ℥ii.;
Syrp. Orange or Tolu, ℥ii.;
Tinct. Ginger, gtt. vi. to xii.;
Water, ℥iss. m.

S. A part, or all at once.

The chloroform water is prepared by dissolving half a fluid ounce of chloroform in one gallon of water.—*Exchange.*

On the Preparation of Iodoform.—By M. D. Guyot, of Nancy. Translated by J. Creuse.—Iodoform is a yellow, solid compound, discovered by Serullas in treating an alcoholic solution of iodine by potassium or caustic potassa. It is insoluble in water, but soluble in alcohol and other liquids. It is volatilized at 100° C. (212° F.) and decomposed at 120° C. (248° F.) Iodoform has been studied successively in relation to its chemical properties by Messrs. Dumas and Bouchardat, and in reference to

its anæsthetical action by Messrs. Franchino, Mowzart, Righini, etc.

Iodoform may be obtained also by the action of caustic alkalies on iodal. Mr. Guyot has prepared it by the reäction of iodide of lime on some volatile and fixed oils. The iodide of lime hereby mentioned, is obtained in a very simple manner, by adding iodine to milk of lime, until it ceases to be absorbed and gives a faint reddish coloring to the mixture. This compound corresponds to the chloride of lime so extensively used in industry.

Oil of turpentine distilled with iodide of lime and water gives a liquid of an ethereal smell which separates into two and sometimes three layers: The first is the unaltered oil, the second water, and the third a liquid containing iodoform in solution. By rectifying this and drying under a bell-jar with sulphuric acid, lime, or chloride of calcium, iodoform is obtained pure.

Certain volatile oils, for instance those of thyme, lavender, rue, lemon, etc., give also iodoform when acted upon by iodide of lime. This same compound is also formed by certain fixed oils; castor oil, for example.

The author hopes that some of these new modes of preparing iodoform will supersede the old tedious and expensive process, and will permit us to manufacture pure iodoform on a large scale at a moderate cost. This is quite a desideratum, as iodoform is used more and more every day, on account of its property of containing 90 per cent. of iodine, without any causticity.—(*Journal de Pharmacie, Mai.* '71).

Therapeutical Employment of the Coloring Matter of the Blood, Hæmatosin. By Tabourin.—(*Gaz. de Paris*, 22, 23, 1870).—Hæmatosin is recommended by the author in all cases in which iron is indicated. It is of more advantage, as it acts stronger, and is easier tolerated. It is prepared in the following manner:

The crassamentum is macerated in a solution of some salt which coägulates, but does not alter it otherwise. The paste thus obtained is subjected to strong pressure, triturated and

mixed with common alcohol, containing two-thirds per cent. of an acid. The hæmatosin is then separated by the liquid, which assumes a bright color. After the liquid is neutralized, a large number of reddish flakes, crude hæmatosin are separated, which are collected over a filter and washed successively with water, alcohol, and ether, and finally dried and powdered.

Hæmatosin appears as a dry powder, insoluble in water and pure alcohol; it can, however, be dissolved in alcohol containing a small quantity of some alkali or acid. It can be given in any shape, in pills, lozenges, troches, etc. Being without taste or smell, it is readily taken by the patient. It contains 10 per cent. of its weight in iron, according to which the dose can easily be regulated.—*Phys. and Phar.*

Steatite.—A mixture of powdered steatite (soapstone) two parts, and hyd. chlor. mitis one part, is the most elegant and effective dry application to the chafed skin of infants. Dry hyd. chlor. mitis, applied once or twice a day to tumid and tender hæmorrhoids situated about the anus, rarely fails to cure them in a few days—*Dr. A. S. Hudson, in the Pacific Medical and Surgical Journal.*

Bromide of Sodium.—Dr. Meredith Clymer, in "The Medical World" for October, 1871, says there is reason to believe that in this drug a happy substitute for bromide of potassium will be found, better tolerated by the system, and free from the objections urged against the latter. He has habitually used the bromide of sodium for some time past in all disorders of the nervous system where he before ordered the potassic bromide. The dose administered is about the same as that of bromide of potassium. In epilepsy Dr. M. usually gives twenty grains three times daily. The drug sometimes seems to occasion constipation, and the eruption produced by the potassic bromide also occasionally attends its use; but all the inconveniences of the latter drug are avoided.—*Exchange.*

Extract of Conium in Inflammation of the Breast.—M. Alstadter, of Pesth, strongly recommends small doses of extract

of conium, repeated several times in the course of the day, for the resolution of inflammation of the breast, arising from stasis of the milk in puerperal women, and reports several cases in which striking advantage was obtained from its use. In all instances care should be taken to obtain as pure and active a specimen of the drug as possible.—(*Wiener Med. Presse*, No. 12, 1871).—*Practitioner*, Aug., 1871.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Chicago.—In a recent issue of the "Boston Medical and Surgical Journal," its editor, Dr. Francis H. Brown, comments upon the different notices which have appeared in connection with the appalling catastrophe at Chicago. Among these notices occurs the following article. It is quoted, including its caption, entire:

"*Recurrent Mental Irritation.*—In striking contrast to the general tone of the Press throughout the country, is a paragraph which we quote from the 'Richmond and Louisville Medical Journal' of the current month. The spirit which rankles in the heart of the writer needs no comment at our hands; it is the spirit which caused the occurrence some years ago of an entertaining correspondence with Dr. Bowditch, of this city; the same spirit, last June, was undoubtedly the cause of an unprovoked attack on Dr. Yandell, of Louisville, editor of the 'American Practitioner,' and should meet with contempt wherever it is shown." We quote Dr. Gaillard:

"There is an interesting and very welcome reflection in connection with this fire. When Charleston and Columbia, S. C., were in flames; when poor, helpless widows and mourning, ruined orphans were fleeing for their lives; seeking safety, shelter, aye even bread, those were gala days in Chicago; there

were bonfires and illuminations; military bands, with their blaring trumpets and exultant drums, were welcomed and cheered through the streets of that rejoicing city. What has been the recent chapter in American history? When that once beautiful and proud city of the lakes was wrapped in the gorgeous and fatal drapery of fire; when this modern city of the plains, like those of biblical memory, was being consumed by the fiery monster, whose lurid folds enwrapped and embraced it, does it appear that in the cities of the South there were retributive bonfires and rejoicings; that when the widow and the orphan were houseless and homeless, there were thousands exulting over their misery and ruin? No! a thousand times no! thanks be to God be it recorded here, that while these thousands at the South, even at that awful hour for Chicago, were being trampled upon, derided and persecuted, history cannot point to a single place, or a single hour, when the agonies of the people of Illinois were made the occasion for feasting and festivity; for rejoicing, and for the display of those manifold exhibitions which bespeak the pleasure and gratification of an exultant people. On the contrary, the poor and destitute of the South sent on to Chicago portions of their daily bread; moieties saved from an enforced and bitter frugality. There has been no exultation; no rejoicing. There has been but one feeling; sympathy for a stricken multitude; anxiety to relieve their destitution; determination to put an end to their wants. It is a beautiful chapter in history. It is worthy of a permanent record."

Note.—If Dr. Francis H. Brown can be believed, it arouses contempt among the Boston public to hear now, that whereas the agonies of the Southern people over the burning of Charleston and Columbia induced bonfires and illuminations at Chicago, the distress of the Chicago people induced sympathy and generous manifestations of charity throughout the Southern States. The statement of these demonstrable facts, in regard to the differences with which the agonies of two people were respectively learned by each other may create (as Dr. B. says it does) contempt, but for whom this contempt should be entertained, the Boston editor does not undertake to declare. Every noble and generous nature noticed with joy the beautiful manifestations of the Southern people when Chicago was desolated; such a manifestation touched a responsive chord in the heart of every brave and true man, whatever his latitude,

antecedents, and associations. Every brave and generous nature recoiled in horror and disgust at the brutalities of those who illuminated Chicago when Charleston and Colnmbia were reduced to ashes; these brutalities elicited the deepest indignation and direst denunciation on the part of every brave and noble spirit, whatever his latitude, antecedents, or associations. No honest man can possibly deny these facts. Their statement excites "the contempt" of Dr. Brown. He terms the recording of demonstrable truths "recurrent mental irritation." He may have his name for it; the name that the true adopt is the true one; they term all this history.

Dr. Brown is pleased to say that the recording of such facts was the result of that same "spirit" which induced a "correspondence" with a Boston physician, and an "attack" upon a physician of Louisville. He is correct. It is the result of that very same spirit—the spirit to declare the truth. It may be that this spirit should "meet with contempt," but the fact is, it has not met with such a reception. On the contrary, this spirit to publish the truth (rather than to take safe refuge in facile eulogy and profitable silence) has rallied to the support of this Journal the truest men and the most distinguished physicians in America; those whose support is a source of pride and gratitude; a support which in character and fidelity would be an honor to any Journal in the world.

Dr. Brown may invoke contempt for this spirit, but he and all similarly organized will find that the contempt will be bestowed where it is least expected. The "spirit" maligned has been a constant guide, and always will be in the management of this Journal. The truth, so far as it is known, will be published, even though some are ashamed to read it, or may term history "Recurrent Mental Irritation." The fact is, there are many who are ashamed of history, but their shame can never prevent its record; it only completes it.—Ed.

Leland's Galvanic Battery.—This invention has for its object to produce an electric battery which will operate continuously without requiring attention, as long as it remains provided with the requisite exciting substances. The invention consists in placing within the porous cup, containing the platinum element, sulphate of mercury alone or mixed with black oxide of manganese, and in surrounding the cup with water, which is in contact with the zinc. This combination, it is claimed, produces reliable action, and is very economical, as the spent sulphate of mercury falls to the bottom of the cup in a shape to be readily reconverted.

The inventor states that, by connecting the poles of the platinum and zinc plates, a steady action is maintained until the sulphate of mercury is entirely decomposed and falls to the bot-

tom of the cup as metallic mercury, ready to be reconverted into sulphate of mercury. This insures great economy.

This battery will, it is claimed, work for weeks or months without attention, except perhaps the filling up of evaporated water, and the supply of sulphate of mercury. No acid being required, offensive fumes are avoided, and much steadier action is insured.

The improvement is the invention of Mr. Edwin J. Leland, of Worcester, Mass.—*Scientific American.*

Placental Expression.—Dr. T. Parvin, in an interesting article on placental extraction and expression, gives an elaborate review of all the authorities on the treatment of the third stage of labor. He has adopted and strongly recommends the method of Professor Crédé, of Leipsic. It is thus described: "Crédé's method is simple in principle and easy of execution. Its object being to reinforce the uterine contractions, the accoucheur should act during a pain, and not in the interval. Success is the more rapid the sooner after the expulsion of the fœtus this effort is made. Nevertheless, it may succeed a quarter or even half an hour after, but this presents an unfavorable condition when the retraction of the uterus has attained its maximum in the first contraction which normally occurs after the escape of the infant; embrace the fundus and the superior part of the anterior wall of the uterus with the entire hand placed transversely, then press downward and backward, assisting, if necessary, with the left hand. Under this pressure, the placenta and membranes are detached; then engage in the uterine orifice; sometimes even escape from the vagina suddenly, just as a cherry seed escapes when the cherry is pressed between the thumb and finger." The advantages claimed for this practice are: 1st. Air cannot enter the uterus. 2d. Hæmorrhage and retention of the placenta are prevented. 3d. Uterine inversion and hour-glass contraction will be more securely guarded against. 4th. The time required to complete the last stage of labor is greatly shortened, three to thirty minutes being all that is needed.—*Ex.*

Puerperal Temperature.—Dr. Henry G. Landis, of Niles, Ohio, gives to the "Northwestern Medical and Surgical Journal," a record of the temperature of the axilla in seventeen cases of labor. The observations were taken at 4 periods—1, during dilatation of the os; 2, within the first hour after delivery; 3, between twelve and twenty-four hours after delivery; 4, three days after delivery. There was an elevation in every case during labor, which was increased in a slight degree subsequently. The average elevation was about two degrees at the first period mentioned, and three degrees at the subsequent times. Considerable differences occurred in the different cases. In two instances an unusually high temperature was followed by copious hæmorrhage. In one case the temperature rose to 106 during a fatal puerperal fever.—*Ex.*

A New Anœsthetic.—Dr. Von Langenbeck employed in six important operations, as an anæsthetic, the æthylid chloride, and found the same possessed many advantages over chloroform. The narcosis occurs more rapidly (from one to three minutes at most), and all unpleasant phenomena are absent, such as congestion, cough, vomiting; the narcosis is quiet, and no suffocative phenomena, and no changes of the pulse, occur. (The editors are informed that, unfortunately, at the end of July last, a patient, on whom the operation of resection of the nervus infra-orbitalis was to have been performed, died during the operation under the use of this medicine).—*Berlin Med. Ges. Rundsch.*, August, 1871.

Small-Pox in Utero.—Dr. J. T. Hampton, of this city, has forwarded the following interesting note: "At 10:30 A. M., Sunday, November 12, 1871, I delivered a woman of a child suffering from small-pox. At the time of its birth the disease had reached the vesicular stage, showing that it had passed successfully through the macular and papular stages in utero. On the morning of the fifth day the pustular stage was reached. Up to this time, and until the morning of the tenth day, the child took nourishment, and seemed to be doing well. On the

morning following it vomited incessantly, blood gushing from its mouth and nose; the same evening it died. The mother was vaccinated successfully six weeks prior to confinement.—*Ex.*

Medicine in Russia.—According to the official reports for 1870, there were in that year 10,000 legally qualified medical practitioners in Russia, of whom 6,113 held public appointments, and 4,686 were engaged in private practice. There is about one medical man to each 7,182 of the population. Among the lower classes the value of rational professional assistance is quite unrecognized; and hence infectious diseases commit frightful ravages, and the mortality among children is greater than in any of the countries of western Europe.—*Clinic.*

Red Sulphuret.—The rubber of mercury used for artificial teeth owes its color to the sulphuret of mercury. Several cases of salivation have been attributed to the presence of this rubber in the mouth. It may be, however, that ill-fitting plates, which are well known to cause salivation, have been the cause in these instances. This is rendered probable from the fact that although the rubber is very extensively used, there have been but very few cases of salivation attributed to it.—*Ex.*

Travelling in Europe.—Very few of our doctors appreciate the value of a visit to Europe. It is worth more than fifty years' experience at home. To have snuffed the atmosphere of La Charité—to have had the typanum vibrate sixty seconds with the mellow tones of Virchow, even if they should get no further into the brain—to have had one benignant smile from a great master at Edinburgh—doubles the circumference of a true American genius, and inflates him with illuminating gas, without the inconvenience of adding a grain to his weight. Henceforth he is a paragon against his home-made fellows, and carries his preëminence as conspicuously as a carbuncle on the end of the nose. He goes swaggering in paths professional and unprofessional. Having seen Paris, he dies.

On the other hand, we have those in the Profession who do not know how to take advantage of their European experience,

who are content modestly to illustrate its advantages in practice without strutting and gasconade.—*Pac. Med. Jour.*

A Sensible Witness on Insanity.—There is a certain Dr. J. R. Allen, at Memphis, who has touched a sympathetic cord within us by testifying as follows, when called as an expert in a murder trial in which the plea of insanity was set up: "I have been a practicing physician for nearly thirty years; I have had some experience in cases of insanity, having been ten years medical superintendent of a Kentucky Lunatic Asylum, and during that time had over 2,000 crazy people under my charge; I have heard the hypothetical case read by Mr. Phelan; I am here as an expert, and, before answering this question, I would like to say that the more I have studied the question of insanity the less I understood it, and if you ask me where it begins and where it ends, neither I nor any physician in the world could tell you; in fact, on occasions like this, lawyers make fools of themselves in trying to make asses of doctors."—*Pac. Med. Jour.*

Fatal Salivation from Bichloride of Mercury.—In a case which is fully reported in the "Lancet" for September 16th, Dr. Meeres applied with a small camel's-hair brush a strong alcoholic solution of corrosive sublimate—eighty grains to the ounce—to the head of a child affected with tinea tonsurans. The application gave rise to no pain at the time, but during the ride home, in an open dog-cart, the child suffered severely. Shortly afterwards, vomiting and purging came on. Salivation, accompanied by much swelling of the parotid and sub-maxillary glands, was first observed on the evening of the day after the application, and continued until death took place, apparently from prostration on the morning of the fifth day.—*Ex.*

Instances of Longevity.—Hon. Horace Binney, LL. D., born in Arch street, above Fifth, Philadelphia, January 4, 1780, graduated at Harvard College, 1797, is still living. Lords Eldon, Stowell, Mansfield, Brougham, and Lyndhnrst, died between the ages of 86 and 92. Lyndhurst, the oldest, was 91

years, 4 months and 21 days; but Mr. Binney is 91 years, 9 months and over Sugden, Lord St. Leonards, born February, 1781, is still living, though several times killed off by the papers. When Dr. Routh, for more than 63 years President of Magdalen College, Oxford, was nearly 100, some one remarked to him, "That is a pretty good old age." "Yes," replied the Doctor, "but there was a dissenting minister who died at 107, and," continued the old gentleman, "I should like the Church to win."—*Ex.*

Application of a Colpeurynter for the Arrest of Epistaxis.—Dr. Closset (*Berl. Klin. Wochenscrift*, June 19, 1871, p. 294), under the name of Rhineurynter, recommends the use of an instrument, designed like a hard-rubber Eustachian catheter, which carries in its curved extremity a delicate sac. When the instrument is passed along the floor of the nasal chamber to the posterior nares, and the sac is inflated it is found to successfully close the posterior nares. It is esteemed above Bellocq's canula, which is deemed inconvenient and more complicated.—*Ex.*

Destruction of an Ovarian Tumor by Means of Electrolysis. By F. Fieber. (*Wien Med. Presse*, No. 5, 1871.—A seamstress, aged 32 years, while carrying a tub of water, fell, and headache immediately supervened, which became so intense as to prevent the patient from walking. She recovered, however, in the course of six weeks. In 1867 she had an attack of intermittent fever, followed by œdema pedum, pain in the abdominal region where she soon perceived a hard swelling of the size of a fist.

Dr. F. found, in 1870, a tumor of the size of a man's head, slightly painful on pressure, hard, nodulated, extending from a half inch below the umbilicus, down to within an inch above the symphysis, its breadth was six inches. Diagnosis: ovarian cyst of the right side.

June 6th, 1870, a large gold needle with a copper pole, connecting with Daniel's battery of twenty elements, was inserted one and a half inches deep into the swelling, one and a half

inches below, and to the right of the umbilicus, the chain was then closed to the left of the umbilicus. While the needle was inserted the patient experienced a sensation of severe burning, which, however, soon disappeared; after seven minutes the needle was withdrawn; reäction slight.

Up to November 30th, electrolysis was repeated eleven times, subsequent inflammatory symptoms but rarely required poultices and small doses of morphine. The needle was inserted into different places. Till the end of November, the swelling diminished but little, afterwards it decreased rapidly. March 10th, 1871, the cyst was reduced to the size of a hen's egg.

Dr. F. urgently recommends in every case the employment of electrolysis before undertaking ovariotomy.—*Centrable f. d. Med. Wiss.* No. 23, 1871.

Test Solution for Pus.—A saturated alcoholic solution of guaiacum exposed to the air till it acquires the property of giving a green color with potassium iodide, is said by Dr. Day, of Geelong, to be a good test for pus. When added to liquid pus, or dried pus moistened, it gives a clear blue color.—*Michigan Journal.*

Chloral as an Antiseptic.—Mr. Stodart, of Bristol, had occasion recently to examine the viscera of a patient who had died from an over-dose of chloral. He observed that the tissues were preserved in an extraordinary manner. Even after the lapse of a week, no sign of decomposition was apparent.—*Med. Press and Circular.*

An eminent physician of Cincinnati commences a lecture on the Pathology of Hydrophobia thus: "The body before us, gentlemen, is the corpse of William Bradford, dead of hydrophobia."

MEDICAL NEWS.

'Nulla dies sine linea."

Cholera.—At the present time epidemic cholera is prevalent in the pachalik of Bagdad, in the central and northwestern provinces of Persia; in the trans-Caucasian provinces of Russia; in several of the Russian ports of the Black Sea and Sea of Azov; throughout Russia in Europe, and in the provinces of Germany on the Baltic and North Sea. The disease is extending from the pachalik of Bagdad into the Hedjoz, from the Black Sea to the Bosphorus, and from the seaboard provinces of Germany to the central provinces of the Empire. In presence of a widely-spread extending epidemic of cholera, which has effected a lodgment in the western-most parts of Europe, and is increasing there, the danger of the epidemic invading Great Britain can hardly be held to be remote, or the precautionary measures premature which are now being so strongly urged upon local authorities.—*Lancet.*

New German Books.—Among the books that have issued from the German press within the last month or two are—the new edition of Virchow's "Cellular Pathology," much improved and enlarged; Professor Traube's "Contributions to Physiology and Pathology," in two bulky volumes, one containing experimental and the other clinical reasearches; a new instalment (the fifth) of Stricker's "Handbuch"; a treatise on Leuchæmia by Professor Mosler, of Greifswald; and an elaborate work, with plates by Barkow, of Breslau, on "Dilatations and Tortuosities of the Blood-vessels," with special reference to aneurism of the aorta in its various sites.

Professor Virchow.—This renowned German pathologist, it is said, intends to leave Berlin and go to London. He has always been a Democrat in politics, and has in consequence suffered a great deal of persecution on the part of the royal authorities.

Honors to Virchow.—The autumn season on the Continent, as in England, is marked by the occurrence of various scientific gatherings. At several of these Professor Virchow has been receiving invitations, which the Berlin newspapers have chronicled regularly. At the Assembly of German Naturalists and Physicians, held at Rostock, his speech was the great event of the meeting. During the Bologna Conference of Archæologists, he was entertained at a banquet by the Italian dignitaries and men of science; and at a scientific assembly held in Rome, the audience rose to their feet to welcome the celebrated Berlin professor, who made them a speech in French.—*Ex.*

Vermont Medical Journal.—As early as possible in the year 1872, will be commenced the publication of a bimonthly medical journal, under the title of "Vermont Medical Journal." Published by J. M. Currier, M. D., at McIndoe's Falls, Vermont. It will be conducted by the ablest physicians in the State. It is designed to make the work *entirely original*, embracing original articles, reports of county and district medical societies, hospital and clinical reports. Price of the volume of 400 pages, $5 in advance.*—*Cin. Lancet.*

The "Chicago Medical Examiner," conducted by Drs. Davis, father and son, was burnt out by the great fire, and the October number, just ready for distribution, was destroyed. The books were saved, and the "Examiner" will be speedily resurrected, and the back numbers supplied. We suppose the "Chicago Medical Journal" shared the same disastrous fate.

Professor Lister, of Edinburgh, was recently summoned to Balmoral, to open a small abscess near the arm of Her Majesty the Queen. The event will immortalize him more than all his other exploits combined.—*Ex.*

A New Ovariotomy Clamp.—Dr. B. F. Dawson, of New York, ("American Journal of Obstetrics,") has invented a clamp of entirely new action, which he claims is an improvement on the

* The "Richmond and Louisville Journal" furnishes for $5 1,400 pages.

somewhat complicated instrument used by Dr. Washn. L. Atlee, of Philadelphia. The entire instrument, made by G. Tiemann & Co., is so light, compact, and small, that its case may be carried in the vest-pocket without inconvenience. It may be used also in the removal of hæmorrhoids, portions of the tongue, penis, scrotum, and extraneous growths.—*Ex.*

National Pharmaceutical Association.—At the nineteenth annual meeting of this Association, held in St. Louis, Mo., Sept., 12, 1871, the following officers were elected for the ensuing year: President, Enno Saunders, St. Louis; Vice-Presidents, C. Lewis Diehl, Louisville, Ky.; G. F. Markoe, Boston; and Mathew, Ash, of Jackson, Miss.; Treasurer, Charles Tuft, Dover, N. H.; Permanent Secretary, Professor John M. Maisch, Philadelphia; Executive Committee, Thomas S. Weigand, Philadelphia; Wm. H. Crawford, St. Louis; Charles H. Danrymple, Morristown, N. J., and J. M. Maisch, Philadelphia.

Obituary.—Died at London, on the 24th of September, in the 66th year of his age, Samuel Solly, F. R. S., formerly Senior Surgeon and Lecturer on Surgery to St. Thomas' Hospital, and President of the Royal Medical and Chirurgical Society. Mr. Solly's principal contributions to medical literature were a work "On the Human Brain," which earned for him an election as Fellow of the Royal Society; a large volume of "Surgical Experiences," and "An Analysis of Müller on the Glands."—*Ex.*

Effects of the War on Medicine.—One of the most striking effects of the late war on our Profession has been manifested in the University of Strasburg. Last year only eleven medical students presented themselves for examination, whilst in the previous year no less than 1,014 received their degrees. One cause of this extraordinary falling off is the awkward position in which graduates of this University are placed, their degrees being acknowledged neither by France nor Prussia.—*Ex.*

Prize Essays.—In accordance with the will of the late Dr. Lacaze, a prize of 10,000 francs is to be awarded by the Faculty

of Medicine of Paris every second year to the best work on phthisis and on typhoid fever alternately. The first prize will be awarded at the end of the academical year 1871–2, for the best work on phthisis. Essays (with a distinguishing motto and the author's name in a sealed envelope), must be sent in before July 1st, 1872. The prize is open to foreigners.—*New York Med. Record.*

Dr. John Edwards Holbrook, whose sudden death in Norfolk, Mass., was recently announced, was born in Beaufort, South Carolina, in 1795. His father was a native of Wrentham, Mass., went early to South Carolina, and married there. Dr. H. graduated at Brown University, Providence, in 1815. He was chosen Professor of Anatomy in the Medical College of South Carolina in 1824, and married Miss Rutledge, grand-daughter of John Rutledge of revolutionary fame. He gave special attention to his favorite study, natural history, in the pursuit of which he has long been distinguished. His well-known work on "Reptiles" was published in Philadelphia in 1842. He was a member of various medical and other societies in Great Britain and other countries of Europe.—*Ex.*——— *Hospital Sunday.*—In England a certain Sabbath is set apart for the benefit of hospitals, and though not by any means universally regarded, is certainly fruitful of good results. In Liverpool, this last year, 195 congregations coöperated in the effort, and collected over $23,000, which were distributed to the medical charity institutions. The next Hospital Sunday is January 14th.———*The Removal of an Inverted Womb.*—Dr. Thomas Hay, of York, Pa., ("Medical and Surgical Reporter"), lately removed an inverted uterus with an intramural fibrous tumor of the fundus. Four weeks afterward the patient was up and about her room, and the operation bade fair to be a perfect success.—*N. Y. Med. Record.*———Dr. J. Taylor Bradford, well known in the West as a prominent gynæcologist, of Augusta, Ky., died on Tuesday, October 31st, after a lingering illness. ———It has been proposed in Paris to convert the new Hotel-Dieu into a city hall, and in its place to erect small hospitals in-

side the city walls. The experience of the late war has proved this to be the best plan for the sick.———A New medical college has been established in Beirut, India, under missionary auspices. The first graduating class numbered six students. five candidates for graduation were rejected.———The botanists of the British Islands failed to discover a single new plant during the past year, so thoroughly has the country been studied in previous years.———*Ophthalmic Society of Heidelberg.*—The next meeting of the Ophthalmic Society of Heidelberg is to be held next August in London.———Sir Roderic I. Murchison, Bart., has bequeathed £1,000 to Dr. A. Bence Jones, his physician.———Of twenty deaths of physicians recorded in a British journal, one was aged 90; and one 95.———The Cinchona plantations in the north of India do not thrive. The climate seems to be too moist.———*Death of Professor Maupin.*—We regret to learn that Professor Maupin, of the University of Virginia, was killed, October 19th, by a fall from his vehicle.———*Dr. S. N. Davis.*—Dr. Davis, of Chicago, did not lose his dwelling nor office during the recent fire in that city, although a fine building owned by him, and situated in the business part of the city, and which yielded a handsome rental, was entirely destroyed. All sympathize with him.———*Tetanus.*—Among other interesting papers lately read before the Academy of Sciences in Paris, was one by M. Demarquay, in which he showed that several cases of lock-jaw had been cured by extremely hot air baths, followed by the injection of morphia under the skin.—*Lancet.*———*Another Surgeon Disabled.*—We read with regret that Mr. Holmes Coote, Senior Surgeon to St. Bartholomew's Hospital, has been obliged to desist from his labors, on account of the critical condition of his health, which demands for the present absolute rest of body and mind.———*English Medical Students.*—It is stated, ("Med. Times and Gaz.," Nov. 4, 1872), that the total number of registered students now pursuing their professional studies in London is 1,491, in the provincial schools 368, making a grand total of 1,859.—*Ex.*———*Bright Prospects for the Juniors.*—It is stated by the

New York "Medical Register" for 1871, that there are now in New York city, Brooklyn, and vicinity, 1,553 physicians in good standing. Comment is unnecessary.———Dr. W. M. Wood has resigned the position of Chief of the Bureau of Medicine and Surgery, U. S. N., and Dr. Jonathan M. Foltz has been appointed in his place.———Quinia is now so extensively manufactured in the United States that only a small quantity is imported.———*Anna Volkow.*—At the meeting this year of Russian naturalists at Kiew, the section of chemistry was presided over by a lady named Anna Volkow.———*Lady Students.*—The much-talked of trouble between the lady students of the University of Edinburg and the governing body bids fair to be brought somewhat nearer to an end by the marriage of some of the female element.———*New Prize.*—The Academy of Medicine of Turin has announced a new prize, under the name of the *Premio Bianco*, which will be given in the beginning of 1873. The value is 1,000 francs; the subject is "Matrimonial Hygiene." All manuscripts are to be sent in before December 31, 1872.———*Special Offer.*—Any one sending five new cash subscriptions to this Journal shall receive a copy of the London "Lancet," *English Edition.* The English Edition of the London "Lancet" is a weekly, and each weekly number of it contains as much matter as the American reprint, which is issued monthly. The "reprint" is about one-fourth the size of the original work. The (English Edition of the) London "Lancet" is unsurpassed by any Medical Journal in the world. Five physicians, (new subscribers), clubbing together, and forwarding $25 shall receive five full yearly copies of the "Richmond and Louisville Medical Journal," and the London "Lancet" (English Edition) as a premium. These journals together would cost $37; they will be furnished to a club of five new subscribers, or to any old subscriber procuring five new, cash subscription, for $25. No such premium has ever been offered.—Ed.

BIOGRAPHICAL.

THE LIFE OF DR. HENRY MILLER.

"Monumentum Perennius Æris."—Hor.

Dr. Henry Miller was born in Glasgow, Barren county, Ky., November 1st, 1800. The population of that part of the State known as the Green River Region was then quite sparse, and his father, Henry Miller, Esq., was one of the three original settlers in the village.

Dr. Miller had not the advantage of a collegiate education, as indeed very few of the youth of that day had; but he acquired, at private schools, a good English education, and superadded to this the study of the Latin language, logic, metaphysics, and geometry.

At the early age of seventeen years he entered upon the study of medicine under the tuition of Drs. Bainbridge & Gist, who were engaged in a large practice in Glasgow and the surrounding country. At that time there were but few apothecaries or dentists in the State, and physicians kept a full supply of drugs in their shops (as they were then called), made their own pharmaceutical preparations, and put up their own prescriptions, besides extracting teeth, the only dental operation performed by them. Bloodletting was in vogue at that time, and the subjects of the operation came to the doctor's shop to have it performed. Most of the pharmacy, dentistry, and bleeding devolved upon the students, who thus had abundant opportunities to perfect themselves in these branches as a part of their medical education.

In 1819 Dr. Miller repaired to Lexington, Ky., to attend the first full course of lectures in the medical department of Transylvania University. A year or two previously, a partial course had been given by Dr. B. W. Dudley, and others; but in 1819, a more complete organization was effected by the accession of

Dr. Charles Caldwell and Dr. Samuel Brown; the former to the chair of the Institutes of Medicine; the latter to the chair of Theory and Practice, with Dr. B. W. Dudley in the chairs of Anatomy and Surgery, Dr. William Richardson in Obstetrics and Diseases of Women and Children, and Dr. James Blyth in Chemistry.

To this new fountain of medical instruction, the first, we believe, opened up in the Great West, Dr. Miller hied, and, after a three days' journey on horse-back, rejoiced in the sight of Lexington, where, he fondly hoped, all the stores of medical knowledge awaited him.

He was one of the small band (less than forty) assembled in a room of the College edifice to listen to the lectures of all the professors, except Dr. Dudley, who lectured nine times a week on anatomy and surgery in his private amphitheatre.

When the session was concluded, Dr. Miller returned to Glasgow, when his senior private preceptor, Dr. Bainbridge, proposed a partnership with him, Dr. Gist having removed to New Castle. The proposition was accepted, and Dr. Miller entered at once upon the practice of medicine; but in the Fall of 1821 he returned to Lexington, and attended his second course of lectures, at the conclusion of which he graduated.

The subject of his inaugural thesis (which was published) was the "Relation between the Sanguiferous and Nervous Systems"; this paper evinced no inconsiderable physiological research.

After his graduation, Dr. Miller returned to Glasgow, and resumed the practice of medicine on his individual responsibility. At the following session of the Transylvania Medical School, the students began to express dissatisfaction with the opportunities afforded them for the study of practical anatomy. This branch of instruction was engrossed by Dr. Dudley, and carried on in the room above his amphitheatre; the students procured their subjects, as best they could, from the graveyards in the city and surrounding country, and performed their dissections with but little supervision by the Professor, while

they were required to pay a very liberal fee. The complaints of the class were brought before the Faculty, and they resolved to appoint a demonstrator. Dr. Miller received the appointment, and the first intimation he had of the discontent of the class and the establishment of a demonstratorship, was the official notice sent him by the Dean, Professor Richardson.

Though Dr. Miller had studied anatomy with great assiduity in Dr. Dudley's room and in the amphitheatre, he gave up his practice, and spent some time in Philadelphia, in order to prepare himself still more thoroughly for the new duties which he had accepted. But on his return to Lexington, he was surprised to learn from Dr. Dudley that he should continue to keep his anatomical rooms open, and that he had not given his consent to the new arrangement. Dr. Miller had, then, either to enter the lists as Dr. Dudley's competitor or resign. He did not hesitate to choose the latter alternative, and returned to Glasgow to resume his practice.

In 1827 Dr. Miller removed to Harrodsburg, Ky., where he engaged, for nine years, in a large and laborious practice.

In 1835 he was induced to remove to Louisville to aid in the organization of a medical school. In 1833 a charter had been obtained by a number of the resident physicians to establish a Medical Institute in the city of Louisville. The corporators divided the several chairs, deemed necessary for teaching the different branches of medicine, among themselves; but dissensions arose that led to the resignation of first one and then the other, until an amendment of the charter was procured in February, 1835, which gave the management of its affairs to a Board, to be selected from any rank or profession, *except the medical.* Of this Board the late Hon. John Rowan was the first president. From him Dr. Miller, while yet in Harrodsburg, received a letter tendering him a place in the school, and offering him his choice between anatomy, obstetrics, and the practice of medicine. He accepted Obstetrics and Diseases of Women and Children, and in the Fall of that year removed to Louisville. On his arrival in the city, he found the prospect

gloomy and discouraging in the extreme. Several of the would-be professors (and among them the late talented and sprightly Dr. John P. Harrison) had abandoned the project and removed from the city; while those who were yet in the field had become lukewarm.

Undaunted by these discouragements, and believing that a medical school might be founded in Louisville which should eclipse that of Lexington, Dr. Miller strove to arouse the community to a sense of the importance of the subject by a series of appeals through the "Louisville Journal." The probability of the speedy establishment of a medical school in Louisville awakened the Transylvania Faculty to a sense of their insecurity, knowing, as they did, that Louisville possessed many advantages over Lexington as the site of a flourishing medical school. The result was that they decided, unanimously it was said, to remove their school to Louisville, but Dr. Dudley retracted, and an acrimonious controversy was the consequence. Professors Caldwell, Cook, and Yandell, determined to unite their fortunes to the nascent Medical Institute of Louisville; the people became interested in the enterprise, and by their instruction the Council granted a liberal aid to the Medical Institute, which put it in operation in the Fall of 1837. Dr. Miller retained the chair of Obstetrics and Diseases of Women and Children until he tendered his resignation in 1858 which was reluctantly accepted by the Board of Trustees. The Medical Institute had, in the meanwhile, been merged into the University of of Louisville, for which a charter had been granted in 1846.

The "Louisville Daily Journal," of May 14th, 1858, accompanied the announcement of his resignation with the following notice:

"*Professor Henry Miller.—The Medical Department of the University of Louisville.*—Most of our city readers are no doubt aware of the fact that Professor Miller, some weeks ago, resigned the chair of obstetrics in the Medical Department of the Louisville University.

The news of this resignation will be received everywhere with

regret; and with something more than regret by Dr. Miller's old pupils, and there are thousands of these. Dr. Miller's connection with the school dates from the very first day of its existence. Every one of its diplomas bears his signature. For twenty-one years, amid all the numerous changes in its Faculty, he has been fixed and constant.

It is but truth to say that, in this long period, he has acquired a reputation of which any man might be proud. It is not a mushroom reputation. It is not the result of trick, or sham, or artifice—of any of those arts by which men of smaller mould endeavor to catch and to retain the popular regard. It has its basis in those solid qualities of mind and heart which will endure as long as humanity endures. It is the steady growth of years spent in the conscientious pursuit of what is right and true in science, and in the fearless discharge of duty in the affairs of life. During his long connection with the school, the breath of detraction or of slander has never dared to assail him, professorially, professionally, or personally. His colleagues, one and all, relied with entire confidence on his judgement, on his sense of justice and propriety; while the students of the institution without a single exception regarded him not only as a most able and instructive teacher, but as a friend and mentor. In this community, where he has lived and worked for a quarter of a century, there is but one opinion of his skill and sound judgment as a practitioner of medicine and of his high qualities as a man. In his particular department of practice he has been and is without a living superior.

Dr. Miller is widely known, too, abroad as well as at home, as an author. Not to speak of earlier matters, he published in 1849 a work on obstetrics, which was received everywhere with favor. Recently he has put forth a new edition of this volume, enlarged and extended in correspondence with his increased experience, and it has at once taken its place among the classics of that dapartment of the Profession. We but repeat the common sentiment of his medical brethren when we say that it is one of the most sound and reliable books in the language. It embodies

the results of a large experience, what he has found and proved to be true, conveyed in a style at once natural, simple, direct, and forcible. He has not followed blindly what are recognized as authorities; he has not received anything as true without having subjected it to the crucible of his own judgment, and, with the frankness and independence and fearlessness that those who know him will recognize as characteristic, with the manhood that marks his whole life, he has not hesitated to call in question opinions or doctrines which appear to him unsound, no matter from whom they emanated, nor failed to give "reasons for the faith that is in him."

As this was written by Dr. Thomas Colescott, (of Louisville, Ky.), an accomplished physician, a true and honest man, a good judge of human nature, one who had enjoyed an abundant opportunity of knowing Dr. Miller well, and who has never been known to stoop to sycophancy, or to use the base though honeyed language of flattery, such testimony is specially forcible and valuable.

In 1859 Dr. Miller was elected President of the American Medical Association at its annual meeting in Louisville.

In 1867, nine years after his retirement from the University, he was recalled to it by the creation of a special chair for his occupancy—the chair of Medical and Surgical Diseases of Wemen. This was done during his absence from the city, and he hesitated long before he concluded to accept it, and at last yielded to the solicitations of his friends in the Board of Trustees and in the Faculty. He delivered a course of lectures on the branch assigned him, during the session of 1867–8, and held a gynæcological clinic every Saturday, which had never been attempted before in Louisville. In the spring succeeding this course, three of the Faculty resigned almost simultaneously, and a door was was thus opened for intrigue in reference to the refilling of the vacant chairs, and intrigue became rampant. The result was that, against the judgment and wishes of the remnant of the Faculty, new Professors were elected and the tuition fees were reduced to less than half of the sum which had been

required since the foundation of the school. Considering such innovations to be degrading to the Faculty and injurious to the interests of medical education, Dr. Miller sent in his resignation. With the same view of the situation, Dr. Henry M. Bullitt resigned his chair in the University, and obtained a charter for another school, under the appellation of the *Louisville Medical College*, which entered upon its first session in 1869–70. Dr. Miller accepted the same chair in this college that he last occupied in the University. The tuition fees in the Louisville Medical College amount to *one hundred and twenty dollars*, with a liberal provision in favor of beneficiaries, and it might have been feared that it could not compete with the University whose fee is only *fifty* dollars. Yet the event has proved that the Profession is fully aware that competent teachers cannot be had without adequate compensation, for in this, the third year of its existence, the college has, it is believed, quite as many actual medical students as are to be found at the University of Louisville.

Aa a practitioner of medicine, Dr. Miller has always been eminently progressive, and among the foremost in adopting improved methods of diagnosis and treatment. He was the first in Louisville, and among the first in the United States, who employed the speculum uteri, and he made it so available in the discovery and treatment of the chronic-sexual diseases of women as, for the last thirty years, to draw patients from all parts of the Southwestern States.

Dr. Miller was the first to employ anæsthesia in midwifery practice in Louisville. In his first case, delivery had to be accomplished by the forceps, and the patient was kept under the influence of chloroform five or six hours. He has since administered it in many hundreds of cases of labor without a single accident.

Dr. Miller is not a voluminous writer. He has, nevertheless, published two works which made him widely and favorably known both at home and abroad as an author. The first of these, published in 1849, was his "Theoretical and Practical

Treatise on Human Parturition"; the second, and larger, work was his "Principles and Practice of Obstetrics." Besides these works he has contributed various articles to the "Western Journal of Medicine and Surgery," the "American Journal of the Medical Sciences," the "Richmond and Louisville Medical Journal," the "American Journal of Obstetrics and Diseases of Women and Children."

This distinguished and venerable physician is still in the discharge of his professional duties. After having received a very full share of the highest honors which the medical Profession is able to bestow, after having for so many years worn the medical crown, he still carries its cross, and is to be daily seen in the execution of the many professional labors which he is not yet permitted to resign. As a teacher, Dr. Miller has been, (apart from the value of his teachings), a model of punctuality. When his hour arrives, he may be certainly found at his post. He has very properly and very justly always believed, that his personal and professional interests should always be subordinate to the interests of his colleagues, of any college in which he labored, and of every medical class with which he was identified. What more can be said? Dr. Colescott has recorded what may well be regarded as the highest honor which can be conferred upon any man; that as a man, a citizen, a physician, a teacher, author, friend, Dr. Miller has been faithfully tried and found to be fully true; loaded with honors and deserving them all. Such a life may, in the language of Horace, well be termed, "Monumentum Perennius Æris."

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The New Year.—May this be a happy new year to all. Unless, however, it indeed be different from all (yes, all) which have preceded it, unless its record of personal histories be as

novel as its record in chronology is new, this happiness, so much wished for all, must come to few indeed. The sad record of sickness and sorrow; of death; personal troubles and pecuniary trials; of treacherous friendships and disappointed hopes has not, by the Great Author, been terminated. To very many, therefore, it cannot be a happy year, but to all it is at least a new one. It brings, in its immediate advent, that familiar though deceptive feeling so universal; the feeling that each one is, as it were, to begin life anew. A new year does each one say; then there must be a new life. Each one forms for himself new hopes, new plans, new purposes. Those who are wise look back upon the past and endeavor to use its lurid record as that lamp which Patrick Henry was so wont to say constituted the chief light by which one's feet are to be safely guided; the lamp of experience. The wise look to this lamp, and to wisdom its light is indeed a faithful guide. Whether this faithful light be held fruitfully aloft, that its rays may illuminate and make clear the immediate path beyond, or whether this beneficent guide be repudiated, and the wayfarer press recklessly forward, relying upon chance or destiny, rather than upon reason or memory, the individuality of each organization alone can determine. Each one's experience becomes history, and history is an oracle before which all must be presented. The wise before this oracle often become idolaters; the foolish wish to be iconoclasts. Whatever be the regard for the past which each may entertain, however, all look with zeal and interest to the future; and, with a new year, all gird themselves anew for the journey of life. Each avocation inspires appropriate thoughts; the thoughts of physicians are as familiar to each reader as they are to the writer; too familiar to justify description. The thoughts of the medical journalist, however, (apart from those thoughts inspired by his daily routine of professional life,) are not familiar to all; they are known to but few. Were these thoughts like those of the dreamy dwellers in the dream-land of Utopia, visionary, impractical, fantastic, bringing in their train no actual, objective, useful results, they would not be

worthy of record or reading; but if they can be made to subserve useful and serious purposes, may they not be written? If such thoughts were like shadows, to vanish only when the beneficent light of each reader's eye were withdrawn, then this record would be in vain; but if in an humble way they may be here scattered, and, like seed, germinate under this beneficent light, may not such seed, however small, be experimentally sown? The experiment may at least be made. The seed is good; the soil is fruitful; the germinating power is strong. Should there not be an abundant harvest?

What are these thoughts? They are the thoughts of a journalist in regard to very material points in American medical journalism; thoughts which are, in part, the result of six years' of incessant labor, with careful and honest observation. As to American medical journalism, the comment to be made is simple, and brief. It should be active, diversified, practical; characterized by independence of action and thought, and by an adaptation to the diversified wants of its supporters. Quick to praise, but as quick to rebuke. Ready to support the true, the honest, the strong, the obscure; but as ready to denounce the charlatan, the trickster, the time-server; those politic souls, those mercenary knaves who are ready to barter the honor and glory of their profession for disgraceful notoriety and personal gain. Where, as in this country, the medical recruits find an easy admittance to the professional ranks, hosts of weak, bad, illiterate, dishonest men become physicians. They imperil daily the physicians' character, that *dulce decus* which, in the minds of all true men, should transcend in importance every other attribute of the physician. Admitted, as are many unworthy of admission, to fellowship and open competition, how many stoop to acts, devices, tricks, which disgrace not only such petty actors, but the grand army of which they are infamous recruits. Imitating others who by such acts have acquired notoriety, what more natural than that they should become notorious and mistake notoriety for reputation? What more natural than that they should destroy what is more valuable to the medical pro-

fession than its reputation, its acquirements and its erudition, when destroying its character, its honor, its glory? There are but two remedies for this evil; the censorship of the Press and the unsparing rebuke of physicians.

Inasmuch as this last, however strong, cannot well be made fully known, the censorship of the medical press, honestly and impartially used, is the chief reliance for redress. While many representing the Press and sustaining the Press think differently, this is one of the thoughts to be here recorded; it is a part of the result of six years' labor, study and observation. A Journal should be more than a mirror of the science of medicine; it should be as well a mirror of its highest character; it should represent not only the highest thoughts of physicians, but their noblest characteristics; it should be as ready to vindicate the last, as it is to disseminate the first. A Journal that is a mere closet for the repositing of printed papers; without individuality, without character, without a constant readiness to defend and develop the morale as well as the mind of medicine, is unworthy of support. A Journal should always and conspicuously manifest that unity of action which inspires its readers with the unavoidable conviction that it has but one controlling power; that this power is in its manifestations untrammeled, and that its decisions are final.

An American Journal should furnish food for the junior as well as for the senior students of medical science. The highest manifestations of science in a Journal may, indeed, cause the highest degree of pleasure in the minds of many erudite readers, but these favored few (even the best) passed through their period of pupilage, when such literature was beyond their years and comprehension. So it must always be. There must be provision for all; the beginners must be instructed, while the learned may yet enjoy themselves; "indocti discant et ament meminisse periti." This old thought, long on the cover of this Journal, and guiding in part its policy, may here be incorporated into its text. These are some of the thoughts suggested for record; they relate to medical journalism. There are other

thoughts, however, more interesting; these relate to medical journals.

In examining the Medical Journals of America for six years, there has been daily impressed upon the mind of the writer the melancholy fact, that while the journals of the Northern and Northwestern States were prospering, (as they deserve to prosper), the Southern Journals, few as they have been, have as a rule languished, (as they did not deserve to languish), gasped the gasp of painful dissolution and then (a chief portion of them) passed away.

In the recent retirement of the "New Orleans Medical Journal," the tenth Medical Journal published at the South since the war has disappeared. In the same period, seventeen new Medical Journals have been created in the Northern States, and, of these, sixteen are now in active operation. There are now in the Northern States, twenty-eight Medical Journals in successful operation, while throughout the entire South there are but five; four of these being quite small. What is the explanation of these facts; do not the Southern physicians read? The answer is simple. Southern physicians do read, but, as a rule, they send the wealth of their resources in purse and pen to Northern Medical Journals. Southern physicians have allowed in five brief years, ten-fifteenths of their own Medical Journals to perish, while they have helped to build up seventeen new Medical Journals at the North, and are now, while five of their own Journals at home need their support, aiding to sustain twenty-eight Medical Journals published in Northern cities. Is this condition of affairs to continue? Should not these surprising and mortifying facts cause a complete change in the course of physicians? Will the true men, those of proper pride and character, when they learn such facts, not create a new life for Southern Medical literature? Physicians ready and able to do this are in every county. Will they not act? It is the example of good men which must make this change.

This is said in no partisan or sectarian spirit. One may look in vain for such a spirit in the pages of this work. Whilst its

editor has by birth, education, labors, and hopes, been identified with the Southern people, in six years of editorial relations with the public there has been no evidence of such a fact in these pages. Indeed so thoroughly has he believed that science is catholic and its empire peace, that sectarianism and all evidences of partisanship have been uniformly excluded; so thoroughly has this been the case, that one-third perhaps of the subscribers to this Journal are Northern men. It can not be said therefore that this prominent present record of the difference in the number, development, and success of Northern and Southern Journals is due to political or partisan feeling; or to what the bigoted and fanatical term, (euphemistically), "recurrent mental irritation." The record is made because it is the record of a great and most important historical fact. But of what avail is this record of current history, unless the record prove to be a lesson to be recollected as well as to be learned? It is to learn the answer, to secure such a result that the historical fact is recorded. And now that it is recorded, what are the involuntary comments? Such historical facts are peculiar to the Southern people. They are a peculiar people; "a people zealous of good works"; but unfortunately they do not sustain these works. The Northern physicians do not act thus. They sustain Southern Journals, but they are very careful to first sustain their own. When asked to "remember the Greeks," they reply, as did John Randolph, "the Greeks are at our own doors." They first sustain those who most need their sustenance, and, this done, they then aid others. The Northern physicians support Southern Journals handsomely after their own are secure; but they support Southern Journals, and many of them do this munificently. Southern physicians are then not enjoined to injure Northern publications, but to emulate this example of Northern physicians, by sustaining first their own publications. With thanks be it recorded, there are thousands of Northern physicians, who do not believe that the wonderful and instructive manifestations of disease all exist, and can be profitably recorded only on the Northern side of the Ohio river; they do not believe, as many Southern physi-

cians seem to do, that Southern Journals are uninstructive and uninteresting; that those who sustain and write for these Journals are less strong, less judicious, less talented, than those who support, and contribute to Northern Journals. Hosts of these large-hearted and large-minded Northern physicians support handsomely Southern Journals, and furnish an example commendable and worthy of all imitation. Yet these gentlemen do not love their own section or their own immediate contrymen less; on the contrary their love is not only strong, but it is essentially demonstrative and practical.

How is it with the Southern physician? One of the strongest of his sentiments is love for his people. How does he evince this?

A Southern physician has arrived at the residence of his patient. He visits the bedside. An Elgin or Chicago watch is used to determine the frequency of the pulse and respiration. A Chatham-street (New York) clinical thermometer is used to determine the temperature. He then opens his Philadelphia saddle-bags, and with Chatham-street scales weighs out medicines purchased in New York. A Philadelphia Pocket Record is then used for registering the clinical facts, and this done he prepares to return home. He warms his feet, by applying his Boston boots near to the fire. He puts on Connecticut rubbers, and a New England weather-suit, and takes a seat in his New York vehicle. The reins of his Boston harness are grasped in his Lebanon Shaker gloves; the New York whip is applied to his Northern trotter, and so this devoted Southern physician returns to his Southern home. Arrived there, he determines to enjoy his Medical Journals. These are all published in New York, Boston, or Philadelphia. Perhaps there may be an Edinburgh, or Dublin, or London Journal among them, but one looks in vain usually for the Southern Journals. Yet this is a fair type of the educated, progressive, Southern physician, who sincerely believes that he loves his people, and is willing, even glad, to do anything to aid, sustain and develope them!! Is not this record true? Has not the time then arrived for each true man to examine these historical facts, and to do what he must feel that it is

his duty to do? There are several Journals at the South which deserve support. Shall they not have it?

Many say that they can not afford to take a Journal. Can they afford not to take one? Do they not charge their patients the same prices that are paid to physicians who subscribe liberally for Journals? Can their advice, without a constant study of recent progress in medicine, be possibly equal to that given by physicians who do thus study current medicine? Can one who does not take a Journal give the best, the most efficient advice? Can one deal honestly with a patient, when he does not give him the best service at the command of the Profession? Can an honest man charge the fullest prices for services confessedly inferior? How often does a single suggestion in a recent Journal save a limb, perhaps a life? How often does recent Journal instruction enable one to render service or perform an operation, which, through the consequent remuneration, furnishes the means of paying Journal subscriptions for a lifetime? It is ruinous to any physician to be without Medical Journals, but what is far more important, to be thus without the fullest information afforded by these Journals, is the grossest, the most inexcusable injustice to his patients, who confidingly, trustingly employ him.

Almost every physician who believes that he is too poor to take a Medical Journal, spends far more than the cost of one for tobacco, for stimulants, for recreations. Is any earnest man ready to confess that he will expend more upon his appetites, than upon his brain, and the Profession of his choice? There is no poor servant so ignorant and illiterate, who is not fully able to devote fifty cents per month for what he believes to be a necessity. Is an educated man ready to confess, that he is willing or able to do less? What bodily necessity should subordinate, in the decision of an earnest student, the necessities of his brain? What honest man can confess that there is anything which should subordinate the wants, the rights of those who employ and trust him? These are plain questions. They are asked with all courtesy and respect.

If these recorded thoughts can induce the physicians of this country to at least divide the support given by them to medical journals, to do only what is just and proper for the several journals published in the Southern States, physicians interested will no longer blush to state that twenty-eight journals are prospering in Northern cities, while most of the five journals at the South are struggling for existence.

It is time for all physicians to act in this matter, but especially the really patriotic, the generous, the just, the true. If these thoughts can induce such action, the little seed here sown will bring forth an abundant harvest indeed, will render really useful the thoughts of a medical journalist at the commencement of THE NEW YEAR.

EDITORIAL BREVITIES.

In consequence of varied duties devolving upon the editor of this Journal as the result of its increased and increasing business, he is entirely unable, as was once his custom, to supervise the subscription and advertising departments of the work. These are entrusted to a book-keeper skilled and unceasing in his efforts to secure entire accuracy in the accounts of the Journal; he will accomplish this. Meanwhile the friends and patrons of the Journal are respectfully asked, when any errors are manifested, to believe that they are more regretted at the Journal office than they can be elsewhere, and that as soon as reported they will be corrected with promptness and pleasure.

——One of the most amusing incidents ever known in medical legislation has just occurred in New York. Dr. Lewis Sayre preferred certain charges against Dr. Ruppaner; Dr. Ruppaner, fearing that he might be expelled from the Medical Society before which the charges were laid, resorted to law, and had, by an "injunction" obtained, all proceedings stopped. The Medical Society was by this course fully trammeled and unable to act. Just at this juncture Dr. Ruppaner found that his proceedings at law were very unpopular, and publishing a pamphlet, sent a copy of it to each of the members of the Medical Society which had been legally enjoined to suspend action. On

the meeting of the Society the question arose, What action shall be taken in regard to the pamphlet which contained an explanatory and very objectionable letter from Dr. Ruppaner in regard to his previous course? The action taken may be easily anticipated; Dr. Ruppaner was promptly and peremptorily expelled. Thus having used a court of law to protect himself, Dr. Ruppaner enables the Society to accomplish the very result which he had so dreaded and evaded. It is the old story; Dr. Ruppaner sets "springes to catch woodcocks," as Polonius has it, while the members of the Society, like the Danish Prince, laugh and exclaim, "'Tis sport to have the engineer hoist with his own petar"; and so it is sport, and all who love justice and a good joke will join in their laugh.———Those who have sent manuscript are respectfully asked to wait patiently for the publication of their articles. Manuscript not rejected (due notice of this being always given) will certainly be published, but there is so much being constantly received, that contributors must exercise patience. It would be far easier to publish the Journal of double its present size, and thus to quickly issue the valuable matter now awaiting publication, than to publish a Journal of the size now presented. Contributions of the most valuable character are being constantly received; the readers of the Journal may expect an abundant pleasure and advantage from them. An editor, however, has much of the nature of Oliver Twist—he is always "asking for more." Everything of value should be sent forward; it will surely appear.———The last number of that excellent little weekly the "Cincinnati Clinic," is exclusively devoted to the subject of small-pox. Every article or paragraph is redolent of variola. One feels after reading it all that the author must really be pitied (pitted). ———The Boyle County Medical Society, Kentucky, has been, in the county papers, rudely and foolishly assailed by some foolish or designing empiric (even though a graduate) for the evident purpose of producing prejudice against the Society, and of inducing popular support of himself. His name is said to be Give-in; a change in the concluding syllable, of up for in, would

better suggest the strength of his article and of its author. The Society will, of course, pay no attention to such devices. It can pleasingly discuss the Pneumatic Aspirater of France; the pneumatic aspirater of Kentucky had best be still further repudiated.

——*Chiles's Inquest.*—The details of this inquest, (in this city), make it one of the most remarkable on record. The wife of the deceased testifies that the attending physician, Dr. C. Blackburn, regarded the case as one of apoplexy; the attending physician testifies that he considered the case to be one of narcotic poisoning. The jury order, under these circumstances, the stomach to be chemically examined, but take no steps towards examining the brain; and take no testimony in regard to the pupil. No poison is found; the brain remains unexamined, and the jury are about as wise before the mutilation as after it. No further examination is made, and the case is dismissed with a verdict of inability to determine the cause of death. In the words of Miranda, one might well term this, "a bootless inquisition." It is remarkable, that if this case was regarded as one of narcotic poisoning, that no treatment whatever for the relief of this condition was instituted or suggested; no emetics given; no use of the stomach-pump; no use of atropine; no enforced exercise; the cold douche neglected; no stimulation or counter irritation; no use of electricity or galvanism. It is remarkable that an examination after death for narcotic poisoning should have been instituted, when, during life, there had been no treatment whatever adopted for the relief of such a condition. Indeed, the question of venæsection was discussed by the attending physician, Dr. Blackburn, and the consulting physician, Dr. Preston Scott, and was abandoned on account of the unsteadiness and irregularity of the pulse. An enema was used. What effect such treatment could have in a case of narcotic poisoning, it is impossible to imagine. By-standers were informed that it was a typical case of apoplexy (the form not being stated), and (as they were medical students) they were enjoined to observe it carefully, as the opportunity was favorable. With such an opinion, the brain most certainly should have been examined

after death. Why this was not done, under such circumstances, is wholly inexplicable. If the case was regarded as one of narcotic poisoning, the treatment was certainly puerile and worthless; if it was regarded as a case of apoplexy, the brain should of course have been examined. It may well be said to be a unique and remarkable case, when its management, either antemortem or post-mortem, is considered. The Medical Profession has certainly every reason to regard this matter with dissatisfaction and regret. Such bungling is inexcusable.———*The Gynæcological Journal, Boston, Mass.*—Mr. James Campbell, publisher of this Journal, will add 16 pages to each number. He promises to give 960 pages for $5. Such liberality is worthy of all praise. The "Richmond and Louisville Medical Journal" gives 1,400 pages for the same price.———*Fresh Vaccine.*—All who wish to procure fresh and pure vaccine can do so by addressing John Wyeth & Brother, 1,412 Walnut street, Philadelphia, Pa. With each crust will be sent the date of its removal, the name of the physician, and, when possible, the name of the child. This House is confidently recommended. All articles manufactured by them are of the best and most reliable character, and any vaccine obtained from them may be used with entire confidence.———"*The Largest Medical Monthly in America.*"—This statement has been made in behalf of this Journal for four years. It has remained unaltered on the title page during the whole of this period; a pledge having been given to remove or modify the assertion if truth demanded such a course. The only medical Monthly in this country which approximates in size the "Richmond and Louisville Medical Journal," is the "New York Medical Journal." Its publishers have largely advertised it as the largest American Medical Monthly. What are the facts? On reference to the last volume of the "New York Medical Journal," it is found to contain 672 pages. The last volume of the "Richmond and Louisville Medical Journal" (the twelfth volume) contains 730 pages. A difference of 58 pages in favor of the latter Journal. It may still then be declared the largest medical Monthly in this country. It

is published at $5 (in depreciated paper currency) annually, when Journals much smaller were published before the war for $5 in gold. Publishing a work of such size, at such a price, leaves but a small difference in favor of the editor, and when his publication is sustained without capital, each reader can understand that this is done at the expense of incessant labor and great care; nothing adds to this care so much as any delay in forwarding the price of subscription. The friends of the Journal are respectfully asked to remember this, and to remove this trouble, rather than add it to manifold others which are inseparably connected with the publication of any periodical. All can comply with this request, and they are earnestly asked to do so.———The reader has only to see the size of this number to understand why its issue should have been slightly delayed. It should contain 112 pages; it contains 148. The index will be issued with the February number. The Journal for 1872 will be mailed about the first of each month. When it is not received early in the month the editor should be notified promptly; otherwise it will be impracticable to furnish the missing number.

THE RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—MIASMATIC HÆMATURIA. By WILLIAM A. GREENE, M. D., Americus, Ga.

A malignant malarial disease, formerly of infrequent occurrence, has within a few years become prevalent to an alarming extent. The disease, under many different names, has prevailed exclusively in the Southern States since 1867 or '8, and known among the people as "yellow fever"—the negroes calling it by no other name. It has received various synonymes among medical men, as black jaundice; cachæmia hæmorrhagica; malignant congestive fever; icterode pernicious fever; purpuræmia fever; yellow remittent; yellow disease; canebrake yellow fever. I prefer the name that heads this paper, and wish briefly to direct the attention of the Profession in the direction of its pathology and treatment. There has never been a disease in this section of country so universally fatal, for recoveries are entirely exceptional. I propose speaking of it as it came under my own observation and that of some of my professional brethren in adjoining counties and neighboring towns. My own observation is limited to *two cases*, but I have been thrown with gentlemen who have treated numbers of cases.

It is very clearly indicated that there exists some general cause for its prevalence, which cause has been stated by some to be "the almost entire neglect of drainage consequent on the changed condition of agricultural pursuits since the war." Whether this be true or not, it seems a very plausible idea, and I am inclined to adopt it. The disease has prevailed exclusively in malarial regions, and in this section has without exception attacked those whose constitutions were already broken down by frequent and repeated spells of chill and fever. I think, therefore, it is a disease due to malaria, and is ushered in by a chill of the congestive type, followed by imperfect reäction, extreme thirst, restlessness and anxiety. Nausea and vomiting are prominent and distressing symptoms, vomiting a dark grumous bile. The spleen is much enlarged and very tender, with intolerable sense of distress over epigastrium, writhing, twisting, and contorting the body in the most excruciating agony, followed soon by a copious discharge of urine of a bloody color, *without urine smell.* With the hæmaturia there is severe pain in the back, well defined over the region of the kidneys. The suffused eyes generally become yellow almost instantly, and the skin red, hot, and dry gradually, but rapidly a yellow bronze; tongue coated thickly, not red; pulse hard and frequent, ranging from 120 to 140; respiration oppressed and 25 to 30 per minute; the discharges from bowels varies, sometimes green, then black, and frequently bloody, resembling the urinary discharges. In the last stages they have occasional delirium, dilated pupils, subsultus tendinum, beating the air with the hands, great restlessness and stupor, picking at the bed-clothes, copious discharges from both mouth and stomach of saliva and ropy mucus, bloody urine increases and is involuntary, when coma and convulsions supervene, and death closes the scene. All this may occur in from a few hours to four days. But before these latter symptoms come on, a remission sometimes occurs, in which there is a decided abatement of every symptom, except perhaps the nausea and vomiting. The skin is often less yellow during the remission, and sometimes there is a clear and limpid discharge of

urine, to resume its blody color upon the invasion of another chill. I have had no opportunity of making an autopsy, but Dr. R. F. Michel, of Alabama, says "They have extreme rigor mortis; muscles very red; a yellow color pervades the brain, chest, and abdominal organs; stomach filled with dark grumous bile; the spleen much enlarged and hard and solid; kidneys enlarged and presenting the appearance of passing through severe inflammatory process or action." I should have stated before that the quantity of bloody urine passed, was greatest during the first twenty-four hours, varying from a half to one pint every three or four hours; after which, in favorable cases, it becomes gradually clear and comparatively scanty. I will now give from my notes the case of a prominent medical gentleman of this county.

Dr. Shrophire, aged forty years, living ten miles west of Americus, Ga., in a malarial region, sent for Dr. George F. Cooper and myself on Tuesday night, October 10th, to see him at once. We arrived at his bedside on the morning of the 11th about 7 o'clock; we found Drs. Cato and Clark in attendance, and they informed us that he was attacked about dark the previous evening with what Dr. S. supposed to be nothing more than an ordinary chill, being the third one of the tertian type, and about four hours thereafter had a copious discharge of urine of a bloody color, which gave him the first indication of the dreadful nature of his disease. He had done a large day's practice, and had taken full doses of quinine to meet this paroxysm. His mind was clear, and he was conscious of his dangerous condition, having treated a number of cases of the same disease with uniform ill success. He was exceedingly anxious about his unfitness for death, and expressed the greatest apprehensions of his future state. His judgment, memory, and reasoning powers were thus all intact. He had been a resident of this vicinity for many years, and was the subject of intermittent fever for several months previous to this period. The chill was followed by moderate fever, parched mouth, extreme thirst, restlessness and anxiety, distressing nausea, and vomiting of a

dark grumous bile. The bloody urine was poured out in increased quantities; the conjunctivæ was instantaneously discolored, and the skin, rough and dry, became gradually of a yellow bronzed color; the tongue covered with a dark yellow fur; great tenderness over spleen; pulse 128; respiration 30; temperature 100°; bowels constipated; severe pain in the back over the region of the left kidney. Drs. Cato and Clark had prescribed fluid extract of buchu, quinine and morphine, portions of each of which had been given. After consultation, we determined to *depend* upon tinct. mur. ferri. in *full* doses, to give occasional doses of quinine to meet the next regular paroxysm, and bromid. potass. pro. re. nata. Also prescribed two comp. cath. pills to open his bowels. The iron was given in thirty-drop doses, repeated every two or three hours, as the stomach would tolerate it. During the preceding eighteen hours, had passed abont one gallon of bloody urine.

October 12*th*, 12 *M.*—Restless and stupid; all his motions are indicative of a restless, uneasy, anxious feeling; pulse 125; respiration 30, full, thoracic; temperature under tongue 102°; temperatuse in axilla 102°; tongue covered with yellow fur, moist and soft; urine very bloody-colored and scanty; increased tenderness over spleen; nausea quite troublesome, occasionally rejecting the medicine, and increased thirst; intellect very slow and dull, and when aroused says he feels easy; has a disagreeable odor. Yellowness of skin extended over entire periphery, even to mucous membrane of lips, and fingers and toe-nails; extremities cold, and surface cold; countenance dull and debility increased. No change in the treatment, except special directions as to nourishment and stimulants, together with moderating the doses of quinine after the time of the paroxysm had passed. Bowels freely opened by the cathartic pills. Required one or two portions of sulph. morphine to produce rest and sleep.

October 13*th*.—Spent a restless night, but the paroxym was prevented. After midnight brightened up; mind clearer, and expressed to his friends hope of recovery. Dr. McLeod, of this

city, had visited him late the previous evening, and used acupuncture with stimulating applications over the region of the spleen and kidneys. He also kindly accompanied me on my visit to-day. We found the pulse 100; respiration 25; temperature 100°; tongue improved; skin moist and soft, and the yellowness more diffused. Urine less bloody-colored, and quite sufficient in quantity. Less nausea and thirst. Continue treatment, diminishing the quantity of quinine and adding chlorat. potas. to the prescription. No action on bowels.

October 14*th.*—Visited by Dr. McLeod, who roports Dr. S. still improving. Condition much more hopeful. Temperature 97°; pulse 100; tongue broad; dirty-white coat, and slightly tremulous. Color of skin fading, soft and flexible, and acted some last night. Feet and hands hot; urine clear of blood-tinge; color almost natural; specific gravity 1010; absence of ordinary smell; test, acid reäction on litmus. Respiration during sleep 28; awake, 24; no action on bowels. Continue treatment, only increasing the intervals of doses. Good nourishment insisted on.

October 15th.—Much better; pulse 95; temperature 97; respiration 24. No tenderness on pressure over epigastrium; tongue cleaning; color of skin fading; urine quite clear and sufficiently copious; no action on bowels; appetite improved; can relish rich soup and egg-nog. Continue treatment.

October 16*th.*—Continues to improve; tongue moist and nearly normal in appearance; pulse 97, full and regular; respiration 23, regular and gentle; urine clear and limpid, and color of skin fading veery decidedly. Directed a comp. cathartic pill. No action on bowels since 13th instant. The following prescription agreed upon:

℞.—Tr. Mur. Ferri, ℥i.;
Sulph. Quinine, ℥i.;
Chlorat. Potass. ℥iss.;
Syr. Ginger, ℥vi. M.

S.—One teaspoonful every eight hours in half a glass of water. Also,

℞.—Sulphite Sodæ, ℥i.;
Ess. Cinnamon, ℥i.;
Rose Water, ℥iv. M.

S.—One teaspoonful every eight hours, alternating with the first mixture.

Thus one teaspoonful of medicine was taken every four hours.

October 17*th.*—Visited by Dr. McLeod, who reports continued improvement in all respects. Continue treatment.

I made no further visits to Dr. Shrophire after the 16th instant, considering him decidedly convalescent. This was the opinion of himself and his attending physicians, as well as all his friends. There was no perceptible change in his condition until the 20th instant, when Dr. McLeod visited him, and found him exceedingly restless and irritable, and could not account for it. All the symptoms of his disease were manifestly better. A few hours after the Doctor left him he became exceedingly restless, and insisted that his brother, who was nursing him, should give him a large portion of morphine. After sending for a neighbor and consulting about it, concluded to do so. He immediately went into a comatose state, and died in two hours.

It turns out that Dr. S. had been for many years an inveterate opium-eater. He carried a two-drachm bottle of morphine to bed with him, and was taking it all the while, hiding it even from his own family. His morphine supply became exhausted several hours before the last visit of Dr. McLeod, and he asked the Doctor to leave him all the morphine he had in his case, which he did, amounting to eight or ten grains. All this he took from the time it was furnished him (5 P. M.) to two hours before his death, which occurred at 9 P. M. of the same evening. Dr. Cato living near, was sent for, but did not arrive until two hours after his death. Thus Dr. McLeod saw him a few hours before and Dr. Cato a few hours after his death, (and Dr. Cato had also spent a portion of the morning of same day with him,) and they both agreed unhesitatingly that death was the result of *collapse*, produced by want or absence of the usual supply of morphine. Dr. Cooper and myself concur in this opinion, and

put the case down as a recovery from the disease, for I never saw remedies act more satisfactorily, and I had positively finished my notes of the case, reporting his recovery, when I was shocked by the news of his death. The only regret I have to express in the treatment of this case is, that the bowels were permitted to remain locked up several days, when, I think, they should have been opened freely with a hydragogue cathartic, and that we did not know sooner about his unfortunate habit of using opium, that the proper quantity might have been furnished him.

Now, concerning the pathology and therapeutical indications in this very fatal and rapidly increasing disease—I must confess my ignorance—as my opportunities for investigating it have been limited. I only hope, therefore, by the following scattering thoughts upon this subject to attract the attention of other medical men, who have seen more of it, and thus call out their experience and opinions. Mr. Editor, we are groping in darkness and gloom concerning this disease, and I hope you will give special editorial notice of the importance of a full investigation into its cause, clinical history and management.

All the cases have occurred in constitutions previously broken down by continued and exhaustive attacks of chills and fever. I believe that in this, as in all malarial fevers, the blood undergoes profound alterations in its constitution. The exhaustion, stupidity, and low muttering delirium, indicate derangement of the cerebro-spinal system, and the alterations of the capillary circulation, and of the respiration; and alterations of the secretions and excretions, and of the structures of the spleen and kidneys, are indicative of derangement of the sympathetic system of the nerves. The poison acts primarily upon the blood, destroying and altering the blood corpuscles, the active agents in the elaboration of the elements of the secretions, and of the muscular and nervous systems(?) This disease is characterized by two pathognomonic symptoms—viz., the passing at intervals of urine of a dark-red color, *without smell*, and a yellow-bronzed skin. I have not examined the urine under the microscope, or

otherwise analyzed it, for want of proper facilities (they not being at hand), but very much doubt the presence of blood corpuscles in the urine. Dr. William W. Gull, in Guy's Hospital Reports by Fagge & Durham, third series, vol. xii., London, gives an interesting account of a disease he calls "intermittent hæmaturia," in which he gives the analysis of the urine, which I believe to be its character and composition in this disease. Under the microscope he found granules consisting of very small prismatic crystals of *hæmatin*, granular casts of the tubules, a few degenerated epithelium cells, and crystals of oxalate of lime. No blood corpuscles were present. One of the great functions of the kidneys, as is well known, is to form the coloring matter of the urine, and when they are not in a healthy state, the hæmatin is not eliminated in the condition of urine pigment, but instead of that, the *hæmatin itself passes off*, and thus we have the *bloody urine*, or urine of a *bloody color*. I believe the best anatomists coïncide in the opinion that the renal tubuli are not excretive, but secretive and absorptive. I think this explains the "*bloody urine*," so called. The *yellow skin* is not, in my opinion, the result of the deposit of the coloring matter of the bile, but of the broken-down condition of the blood, explained thus by my friend Dr. George F. Cooper, of this place: That when a violent blow has been received on any portion of the body, then follows a *bruise* of diffused yellowness around the injured part, which precisely resembles the yellow-bronzed skin in this disease, and the same pathological process develops in the one as in the other. The low temperature in this disease, as well as the slow pulse, are noticeable, as is perceived in the case of Dr. S., and I believe are characteristic uræmic phenomena. The patients generally die from uræmic poisoning, as manifested by the delirium, coma, and convulsions, and is the consequence of the excretory function of the kidneys being either arrested or inadequate to a proper elimination of this excrementitious substance. Persistent vomiting and purging* are always present in this disease, and belong to

* The constipation in Dr. Shropshire's case was the result of his morphine habit.

the clinical history of uræmia; and these symptomatic events are due to efforts of elimination of the urea through the gastro-intestinal mucous membrane. Dr. Michel, in his Autopsy, says "the kidneys are enlarged and presenting the appearance of having passed through severe inflammatory action," in consequence of which condition, the excretion of urea is prevented. It accumulates therefore in the blood, and if not vicariously eliminated, must sooner or later produce its pathological effects. Concerning the treatment of this disease, I have no matured opinion. In the two cases I have had an opportunity of visiting and treating from the beginning of the attack, I depended on quinine, mur. tinct. ferri, strychnia sulph., bromid potass., stimulants, and good nourishment. Many physicians in this section administer calomel and opium, with a view to salivation, and place large blisters over the epigastrium.

This plan of treatment appears to me to act in concert with the malarial poison, and exhaust the small store of strength the patient may have. Others again depend on diuretics, sudorifics, sedatives, alteratives, antiseptics, and astringents to control the *supposed* hæmorrhage from the kidneys. Thus it will be perceived there is no uniformity or similarity of treatment, nor can there be until we have a correct knowlege of its pathelogy. I believe the therapeutecal indications are, first—to relieve the patient as rapidly as possible of the cold stage, by the administration of drachm doses of chloroform and the external and local application of mustard or other rubefacient applications, and to prevent a *recurrence* of the *chill*—for the *periodicity* of this disease must not be lost sight of. I am satisfied many die from the *second* paroxysm, who had been fortunate enough to survive the first, because of the ignorance of the physician of this fact. I therefore prescribe quinine in *full* doses from the beginning, say scruple doses, and if the stomach refuse to tolerate it, the never failing hypodermic syringe is called in to requisition, and proper doses thus administered. It will not do to wait for an intermission or remission of the fever, as many do—but the quinine must be *pushed* from the very beginning and continued

in such doses and repated at such intervals, as will speedily induce complete quinization, and this effect continued as long as there is a probability of a paroxysm. The quinine may be often advantageously combined with camphor or piperine and covered with capsules. The second indication is to restore the blood, to *mend* it as rapidly as possible, by overcoming the poison or poisons, with antagonizing, neutralizing, and eliminating remedies by all the emunctories. If uræmia accumulate favor its vicarious elimination, for there are no known means of *neutralizing* or *antagonizing it* in the blood, or protecting the system against it poisonous effects, diuretic remedies then seem indicated, which unhappily are often imperative when the kidneys are much diseased, and more especially is this true, when the blood also is under bad influence. Urea may be eliminated vicariously through the intestinal canal and skin by hydragogue cathartics and sudorific measures. The spontanous efforts of the stomach and bowels at elimination are not to be too much interfered with. In this connection I would suggest:

℞.—Spts. Nit. Dulc., ℥ss.
Tr. Gelsemin, gtt. xxx. M.

Sig.—Take every 4 or 6 hours.

Under this head tinct. mur. ferri. stands preëminently as *the* remedy, given in as large doses and as frequently repeated as the stomach will bear, say 20 or 30 drops every 2 or 3 hours. I would also recommend the Sulph. Strychnia in this stage, in combination with Phosphoric Acid, thus:

℞.—Sulph. Strychniæ, gr. ii.
Dilute Phosphoric Acid, ℥i. M.

Sig.—Three or four drops every 6 or 8 hours, in a wine-glass of water.

If the bowels are not freely opened in this stage, I prescribe a hydragogue catharlic, and prefer a full dose of calomel and jalap. Carbolic acid or sulphite of soda may be very advantageously prescribed and continued from this period through convalesence until the skin has received its natural color, and the urine its proper constituents. The quinine should not be

continued in large doses after the paroxysms are broken up, combined with tinc. mur. ferri. and chloras potass., as in the prescription for Dr. Shrophire. Good diet and stimulants are indispensable throughout the disease, and should not be neglected in the wild search for medicines. Bromide potass. and chloral hydrat are the best hypnotics.

This paper has been prepared at such intervals of leisure as I could find in the pressing and harrassing business of practicing medicine and controling free-negro laborers, and I am confident is full of imperfections, and perhaps I should not offer it for publication without maturer consideration. My only apology is that the exigency of the case demands that the disease should be brought before and to the notice of the Profession, and medical men be requested to contribute their views freely. It is certainly a most fatal and unmanageable malady. A most remarkable and noticealbe feature of the disease is that *no negro has ever been known to have it,** *not one* in this section of country at least.

ART. II.—ON THE TREATMENT OF SYPHILIS WITH HYPODERMIC INJECTIONS OF CORROSIVE SUBLIMATE. By DR. ANATOL SCHMIDT, Clinical Professor in Warsaw. Translated by J. A. OCTERLONY, M. D., Louisville, Ky.

During the winter of 1869 we made some trials in the Ujasdow Military Hospital, at Warsaw, of the treatment of syphilis with corrosive sublimate injections, according to Dr. Lerrins's method. We aimed from the very outset of our work without biases to ascertain the real advantages of such a plan of treatment. The material annually at our disposal amounts to over two thousands syphilitic patients. We have therefore been able to select for our investigations such subjects as appeared to us to present all the conditions most essential to this treatment.

It is true our small number of observations cannot be com-

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* This is an error.—ED.

pared with Lerrins's enormous statistics, we believe, however, that even this limited number entitles us to the conclusions we have formed as to the conclusions we have formed as to the value of corrosive sublimate injections. In order that our patients after a cure should be completed might still remain under our observation in case of relapse, we selected, by preference, those who belonged to regiments permanently quartered in Warsaw. The greatest attention was paid to the clinical history and all in this respect doubtful cases were not included. The number of observations thus instituted were thirty-seven.

According to the plan of Dr. Auspitz's, which is the most rational, the cases were divided into two classes acute, (recent) and chronic. But in order to realize the importance of individual forms we also arranged them according to the customary classification, as follows:

RECENT.

1. Indurated ulcer, ...	5 cases.
2. Indurated papule	2 cases.
3. Primary induration, and bubo in the groin .	7 cases.
4. Indurated ulcer bubo and roseola . . .	3 cases.
5. Bubo without primary induration . . .	5 cases.
6. Bubo in both groins simultaneous with a primary induration on the penis	2 cases.
Total	24 cases.

CHRONIC.

7. Condylomata of the anus	2 cases.
8. Throat catarrah, condylomata and roseola . .	2 cases.
9. Ulcerated sore throat	4 cases.
10. Ulcerated sore throat and condylomata . .	2 cases.
11. Ulcerated sore throat and papulo-lenticular eruption	2 cases.
12. Osteocopic pains, chronic laryngitis, and aphonia gummy tumor. (Syphilis tarda) . .	1 case.
Total	13 cases.
Grand total	37 cases.

These selected patients were young soldiers, the youngest twenty, the oldest thirty-five years of age. Eighteen of them had a robust constitution, and had not before been sick; out of these eighteen were sixteen recent and two chronic cases. Besides there were six recent and seven chronic cases of weakly constitution, but who had not had any important disease until affected with syphilis, except scrofula during childhood. Six of the patients were evidently much enfeebled by reason of long protracted syphilis and the anti-syphilitic treatment employed; two of these had gone through an attack of typhoid fever two years before, one had chronic tuberculosis of the lung.

We would not have subjected the patients of the latter class to a course of corrosive sublimate were it not that Lerrin encourages such a plan, stating that it is just to subjects with weak lungs and otherwise affected that he finds this plan, (the injection method), to be the best adapted.

The incubation varied in the recent cases between ten and twenty-five days. In the chronic between six weeks and six months. The patient whose case is marked No. 12, (syphilis-tarda), had according to his own statement been treated for repeated relapses during the last seven years.

The twenty-four recent cases were patients then in their first attack, and although seven of them entered the hospital with fading primary induration on the genitals, yet had they not used any mercurial preparation before admission.

For the sake of comparison we selected thirty-seven other patients under quite similar conditions, the latter class were placed upon different mercurial preparations according to the usual anti-syphilitic methods.

The injections were made under our direction by the assistant physician, Dr. Putilowski, and the rules given by Lerrin for the performance of the operation were carefully observed. An injection was made daily at the morning visit; we did not repeat it more frequently, but intend to so in another series of experiments.

An ordinary graduated hypodermic syringe, with a steel

canula, was the instrument employed, and solutions of corrosive sublimate of three different strengths were used according to Lerrin's directions.

We calculated that the doses used were as follows: For a weak injection one-eighth of a grain; for a medium dose one-sixth, and for a strong injection one-quarter of a grain.

At such rates the treatment by means of injections was completed only in twenty-one out of the thirty-seven; of these fourteen cases were recent and seven chronic. Ten refused to submit to this treatment on account of the pain; in six of the patients, although they were treated exclusively by means of bi-chloride injections, we found it necessary, after a while, to discontinue them, and resort to local treatment.

Finally we were obliged, later on, to treat three of the recent and four of the chronic cases according to other methods.

Of the twenty-one, successfully, and without interruption, treated with injections, three took the weak, sixteen the medium, and two the strong solution. We gave as after treatment iodide of potash internally to three; corrosive sublimate internally to one, and two were ordered mercurial inunctions. The internal use of the sublimate was resorted to in an acute; the remaining four were chronic cases.

The greatest length of time we continued the injections was eighteen days, so that the whole quantity given was in weak solution two and one-quarter grains, medium solution about three grains.

Of the strong solution we gave only in one case more than fifteen injections; where eighteen injections were made the quantity of bi-chloride was about four and one-half grains.

The diet was regulated according to the circumstances and condition of each case; the patients generally had the ordinary hospital ration—soup, vegetables, and wheat bread.

Wine was entirely prohibited; those accustomed to it were allowed to smoke. The temperature of the wards was continually about eighteen degrees, as our observations were made in the winter; no preparatory treatment was adopted. The pa-

tients took every week, for the sake of cleanliness, a sweating-bath, which, owing to general custom in this country, is a necessity even with well persons.

Under these influences the syphilitic manifestations pursued a varying course. The lighter forms, both primary and relapsing, disappeared most speedily. A recent sore, catarrhal angina, and light condyloma with roseola disappeared after ten to twelve injections medium strength.

We noticed that the primary sores on the genitals, and the indurations, passed away without ulceration. The sores soon became clean, and healed rapidly; but the indurations, on the contrary, disappeared quite slowly. This, however, ought not to surprise us, as even under former mercurial methods the sore, in comparison with the induration, plays only a secondary part. For the primary indurations we gave from twelve to eighteen injections, sometimes of the weak, at other times of the medium solution; in one case we were obliged to institute after-treatment by the internal use of the bichloride. The course of ulcerative angina and papulous syphiloderma was more troublesome. It is true, in such cases not more than eighteen injections of medium strength were employed, but the ulcers in the throat required active local treatment, with cauterization and gargles. Indolent buboes seemed among the most unmanageable manifestations, and we have found no essential difference between those accompanying the primary stage and others which remained as relics of chronic lues.

We have never practiced injections into the substance of the indurated glands, although we do not share Lerrin's apprehensions in regard to such procedure. At the same time, with the injections we directed the use of local remedies, in order to bring about absorption of the swelling, if possible. In spite of all we did the indurations proved obstinately unmanageable. In some cases the injections appeared insufficient, and then we resorted, as mentioned above, to mercurial inunctions and the internal use of iodide of potassium. The after-treatment lasted as long as usual under these methods; but in these cases it is

therefore uncertain to which plan of treatment the results should be ascribed. The complications noted were as follows:

1.	Pain	10 cases.
2.	Access of fever and debility . .	2 "
3.	Erysipelas	1 "
4.	Diphtheritic ulceration of the skin .	1 "
5.	Salivation	1 "
6.	Intercostal neuralgia . . .	1 "
7.	Intestinal catarrh . . .	1 "

In view of the result above recorded, we desire to add a few remarks. The treatment by means of corrosive sublimate injections is certainly not without the successful results which are to be obtained from other mercurial methods. It involves at the same time certain complications, which now and then very soon interrupt, and sometimes necessitate an entire cessation of its further use. The pain is perhaps to be placed first among the complications.

Lerrin attaches very little importance to it, yet our experience shows that it is in many cases so formidable that the patients utterly refused to submit to further treatment by this method. Of our thirty-seven patients, ten discontinued the injections, because of the pain induced by them, and yet our patients were young men who could not be accused of being excessively sensitive, and besides, they were soldiers, from whom the physicians may expect far greater obedience and patience than in private practice.

During the first few days they bore the injections comparatively well, but they soon found them so burdensome that a repetition of them was not to be expected. We repeat, that in our cases no more than one injection daily was ever made.

The other complications were not of peculiar importance, as they are equally to be expected from other mercurial methods.

The greatest advantage of the hypodermic method would principally consist in its short duration. But this superiority could only be accorded to it if it were not followed by relapses.

But on that point we can form no opinion beforehand. It is

true, after having employed this method, we observed only two relapses, both in chronic cases, but we must not forget that our experiments date back scarcely half a year.

ART. III.—CASES OF ENLARGEMENT OF SPLEEN (AGUE CAKE) TREATED WITH HYPOSULPHITE OF SODA. By THOMAS HILL, M. D., Danville, Mo.

It having been my fortune monthly to have to treat several cases of enlargement of the spleen, and finding all the methods recommended in the books unsatisfactory, I concluded to try the effect of hyposulphite of soda, and met with such good results that I am induced to send you a report of a few cases for the Journal.

CASE I.

K. B., aged eight months, male. This little child had been having ague and fever almost from his birth, his mother having suffered with them almost through her whole pregnancy. The whole family having ague and fever, living on a low mill-pond, I recommended a removal to a more healthy locality, and put them on quinine and iron; they all soon improved, except the baby. Upon carefully examining it, I detected the presence of a large ague cake, and made the following prescription:

℞.—Quinine, grs. viii.;
Hyposulph. Soda, grs., xvi.;
Water, ℥j.;
Elix. Vitriol, gtts., vi.

Sig.—Give a teaspoonful every two hours. A poultice of hoarhound to be applied to the spleen. In two days the enlargement had subsided, and by the use of small doses of iodide of iron, the child was soon restored to health.

CASE II

Was an adult male. In this case ten-grain doses of hyposulphite of soda, with one grain of quinine every four hours, completed the cure.

CASE III.

An infant seven months of age. Spleen enormously enlarged, with a yellow-jaundiced appearance of skin; chills and fever every other day. I put this child under the same treatment as the first, with an occasional dose of hydrarg. cum. creta., grs. ij., and in four days it was entirely restored.

I would here state, that in the treatment of ague and fever I have repeatedly used the hyposulphite soda, and generally with good results; but for it to act beneficially, I have found that it must be dissolved in a plenty of water, or two ounces of water to ten grains for an adult.

I have treated a good many other cases, but think these examples enough to draw the attention of the Profession to the remedy.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—RETROSPECT OF UTERINE PATHOLOGY AND THERAPEUTICS IN THE UNITED STATES—SPECIALLY IN REGARD TO INTRA-UTERINE MEDICATION IN CHRONIC INTERNAL METRITIS. By HENRY MILLER, M. D., Louisville, Ky., Emeritus Professor of Obstetrics and Diseases of Women and Children in the Louisville Medical College, and President of the Faculty etc.

The revival of the speculum uteri by M. Récamier, in the early part of the present century, gave a new impulse to the study of the medical and surgical diseases of women. Instead of relying almost exclusively, as heretofore, on signs and symptoms for their diagnosis of the diseases of the sexual organs of women, physicians henceforth sought to discover by the sight and by the touch, more methodically employed, the actual morbid state of these organs. And not only was a greater accuracy of diagnosis thus acquired, but efficient topical treatment was brought to bear upon maladies otherwise irremediable.

The French physicians hastened to adopt the new methods of diagnosis and therapeutics, and in a few years numerous monographs and volumes of larger size were published by them. Among these productions not the least valuable was that of Madame Boivin and Dugès,* which chanced to fall into my hands in 1835, the year of my removal to Louisville. To this work I owe my first lessons in the new science and art of gynæcology, which I have since pursued with whatever aids I could derive from other authors, but without any assistance from clinics or the personal aid of others. Indeed, at the time to which I refer, 1835, the speculum was not used in this city; there was but one among us, and that had been brought with him from Paris by the late Dr. A. P. Elston, a short time before my removal. Once only the Doctor invited me to accompany him to the work-house, where he used it in the case of one of the inmates. I never heard of his using it again, and my impression is that he never did. He was a genial young gentleman, in easy circumstances, without ambition or energy, and died young. With the work of Boivin and Dugés before me, the speculum had a great attraction for me, and I ordered from Paris one of Charrier's quadrivalves, and embraced every opportunity to use it. Though decried at first, the speculum became a success in my hands, and was gradually adopted by my professional brethren, and prejudice against it gradually subsided.

I am not advised that the speculum was introduced into practice much, if any, earlier in our large cities. I have recently been informed by Dr. John T. Sharpless, of Philadelphia, that he was the first to employ the speculum in Philadelphia, in 1835, when it met with the ridicule and censure of the highest medical authorities of the city. Dr. Sharpless visited Paris expressly to qualify himself for this branch of practice under the celebrated M. Ricord, who assured him that he was the first American whom he had known to provide himself with a speculum before returning home.

* "Traité Pratique des Maladies de l'Uterus, et de ses Annexes." Paris. 1833.

For the first few years after the introduction of the speculum into our medical centres, it was scarcely known in general practice, because we had no works in the English language that treated of it; but in 1837 Dr. Joseph Warrington, of Philadelphia, published a translation of a French work entitled "Traité Théorique et Pratique sur les Altérations Organiques, Simples et Cancereuses de la Matrice," by Dr. F. Duparcque. This was the first work of its kind fairly brought before the mass of the Profession in this country, and is altogether founded on clinical observations made with the speculum and touch, and illustrated with the recital of numerous cases of the different kinds of engorgement and ulceration of the uterus met with and treated by the author. In it are given directions for the use of the speculum and the employment of the touch in the investigation of the diseases of women, and the knowledge so gained is clearly stated. I published an analytical and critical review of the work in the April number of the Louisville "Journal of Medicine and Surgery" for 1838, with a view of calling the attention of its readers to the novel and more precise, I might say the demonstrative, manner in which the subjects are treated, in the hope of exciting them to engage in similar researches. That such a work was a desideratum at that time is obvious from the confession of the translator, himself a teacher, where he says he undertook the labor of translating to supply his own want of information, and the openly acknowledged wants of the Profession in this country, as testified to by such eminent men as Professors Hodge, Jackson, and Mitchell, whose recommendations are published by Dr. Warrington. Says Dr. Hodge: "The whole is well worthy of publication, as enlarging our knowledge of uterine complaints; and especially as furnishing practitioners in this country information not easily to be obtained." Dr. Jackson says: "It embodies a mass of interesting and highly useful information on a class of diseases occurring daily in practice, and which are constantly overlooked or are unknown." "The uterus is so little studied," says Dr. Mitchell, "that ignorance respecting its maladies is among

the most common errors of the physicians of this country."

Duparcque's work was doubtless instrumental in disseminating among us the new methods of physical diagnosis and the more scientific treatment of diseases of the uterine organs; but it was reserved for Dr. J. Henry Bennet, of London, as the apostle of the speculum, to propagate the knowledge of it in England and the United States, and to convert multitudes to the faith of it in an incredibly short space of time. After a connection with the Paris hospitals, which lasted seven years—three as a pupil and four as a resident medical functionary—he returned to London, and settled as a specialist, where he soon acquired a large practice, in despite of bitter opposition from some of the most eminent medical men of that metropolis.

Dr. Bennet brought the subject before the Profession in a series of papers in the London "Lancet" for February, March, and April, 1845, entitled "A Practical History of Inflammation, Ulceration, and Induration of the Neck of the Uterus," which were published in June of the same year as a small volume, which has since passed through several editions, so great has been the demand for it in Great Britain and in this country. The first American edition was published in 1847.

The distinctive feature of Dr. Bennet's first edition is, that he locates the diseases of which he treats exclusively in the os and cervix of the uterus; thither alone his topical remedies are directed, thus virtually ignoring the body of the uterus, under the persuasion that it is seldom the seat of disease. The cases which he relates are all of them cases of inflammation, ulceration, and induration of the neck; and, in commenting on a statement of the French surgeon, M. Gosselin, to the effect that ulcerations of the uterine neck are almost invariably occasioned by internal metritis or inflammation of the uterine cavity, and that this form of inflammation nearly always accompanies and keeps up the ulceration, Dr. Bennet remarks: "I am quite prepared to acknowledge that internal metritis, especially after labor, is an important cause of inflammation and ulceration of the cervix, but I certainly cannot admit that it is nearly

always the sole cause of the lesion, or that it generally coïncides with it in its after-stages."

It is necessary to define here the sense in which the term "internal metritis" is used by Dr. Bennet, and in which it will be used by myself in this retrospect. It is applied to inflammation of the mucous membrane of the cavity of the body of the uterus, in contradistinction to that of the cavity of the neck of the organ, which we shall designate "cervicitis," qualifying it by the prefix "external" or "internal," according as the inflammation or ulceration is seated without or within the external orifice of the cervix. Dr. Tilt* uses the term "internal metritis" in the same sense as Dr. Bennet, and I prefer it to the technology proposed by Dr. Thomas,† "corporeal endometritis," while simply "cervicitis" is preferable to "cervical endometritis," especially when that term is made to include, as Dr. Thomas makes it, "inflammation of the mucous membrane, extending from the os internum through the os externum, and *over the vaginal portion of the cervix uteri.*"

In the second edition of his work, published in 1850, which is considerably enlarged, Dr. Bennet devotes a few pages to internal metritis, which, as he alleges, "is a *rare* form of uterine inflammation, and has only been considered common because it has been confounded with inflammation of the *cavity of the cervix*, a disease which, on the contrary, is very often met with."

Again: "The result of a careful examination of all the cases of inflammation that I have seen during the last three years, amounting to between five and six hundred, with reference to this point, has shown me that in the immense majority the inflammation does not extend into the cavity of the uterus." According to Dr. Bennet, not only is inflammation of the cervix so very much more frequent than internal metritis, but the latter, when met with in practice, is the result of the lengthened existence of the former, the inflammation gradually progressing along the cavity of the cervix until it reaches the os internum and passes into the uterus.

* "On Uterine and Ovarian Inflammation" Third edition. London. 1862.
† "Practical Treatise on the Diseases of Women." Philadelphia. 1868.

Dr. Tilt,* who has been intimately associated with Dr. Bennet, and had the care of many of his patients in his absence, dissents from his opinion on this pathological point. "I derive what I know of this complaint (internal metritis)," says he, "from a long study of its pathology, from my own errors in prognosis, and also from the circumstance that, when Dr. H. Bennet's health failed three years ago, I was called upon to justify the confidence placed in me, by realizing at once the morbid condition to which many patients had been reduced by internal metritis of several years' standing." Having clearly in mind and on paper the details of fifty cases in which chronic internal metritis plays a prominent part, Dr. Tilt gives the results of their analysis, for which I refer to his work.

The following varieties of chronic internal metritis are particularly described by Dr. Tilt: 1. Menorrhagic; 2. Purulent; 3. Exfoliative; 4. Pseudo-membranous; 5. Ulcerative; and, 6. Senile, most of which I have myself met with in practice.

There can, I think, be but little doubt that Dr. Bennet's attention has been so preöccupied with the diseases of the neck of the uterus that he has overlooked those of the body in very many cases. He is at variance, too, with the great body of the French uterine pathologists, who ascribe to the body of the uterus an equal or even a greater participation in the disease variously denominated by the terms "flux muqueux," "catarrhe uterin," "fleurs blanches," in which they all concur in the opinion that there is acute or chronic inflammation of the mucous membrane of the body of the uterus. The mucous or muco-purulent discharges are furnished by the glands of the lining membrane of the body and neck of the uterus, mingled with the secretions of the vagina, which nearly always participates in the catarrhal inflammation. In examinations with the speculum, if the cervical mucous membrane is specially inflamed, the transparent or slightly opaque, tenacious mucus secreted by its follicles is seen adhering to the external orifice in

*Op. cit.

great abundance, and is with difficulty wiped off with a mop. This glutinous mucus may be regarded as pathognomonic of internal cervicitis, and, as no other mucus is usually seen within the os or within the act of escaping from it, Dr. Bennet seems to regard it as conclusive proof that all the discharges attendant upon the disease are furnished by the neck alone. He does not consider that the mucus secreted by the glands of the mucous membrane of the cavity of the body of the uterus may be specifically different from that secreted by the follicles of the neck, and, if it be not so glutinous, it will escape through without adhering to the os. According to the observations of Dr. F. A. Aran,* such is the nature of the mucus of the uterine body as it is found in post-mortem examinations. It is always liquid, slightly viscid, sometimes transparent, at other times more or less opaque, creamy, yellowish white, puriform, or mixed with blood. This mucus is sometimes found only in small quantity, collectible by raking the surface of the mucous membrane. At other times, the liquid is accumulated in great abundance, distending the uterine cavity, and giving it an ampullaceous form. Other unmistakable evidences of internal metritis were found by Dr. Aran in his post-mortem examinations, such as thickening of the mucous membrane; its red, or livid, or slate color; its being thickly set with little prominences, the intensity of its redness being in proportion to the number of these prominences; destruction of the epithelium, if not in the whole, at least to a certain extent, of the mucous membrane.

Dr. Bennet's idea of the anatomy of the mucous membrane of the body of the uterus appears to have misled him in regard to its secreting capacities, when he says that it is in an elementary condition, "so obscure, indeed, that its very existence has been denied by many anatomists." So far is this from being true, that the beautiful researches of M. Coste† prove that the

* "Lecons Cliniques sur les Maladies de l'Uterus et de ses Annexes." Paris. 1858–60.

† "Histoire Générale et Particuliére du Développement des Corps Organisés." Paris. 1847.

unimpregnated uterus is lined by a very thick mucous membrane, which is composed, for the most part, of innumerable glandular tubes, connected together by very lax cellular tissue. These glandular tubes are placed side by side, with one of their extremities in contact with the muscular coat of the uterus, and the other opening upon the free surface of the mucous membrane, in such numbers as to give to it a sieve-like appearance. They secrete abundantly, when in a state of morbid excitation, the peculiar mucus which has just been described, and is as widely different from the cervical mucus as is the anatomical structure of the glands respectively.

Considering the different nature of the mucous secretion of the glandular tubes of M. Coste, it would be the merest chance if we should detect it in its transmission through the os externum. It is only when it accumulates in the uterine cavity, from temporary coarctation of the os internum, that it is seen to issue in considerable quantity, as I have witnessed on several occasions. It is difficult, therefore, to diagnose internal metritis by the symptoms, or even by a specular examination, inasmuch as the seat of the disease cannot be brought under our inspection. But by the use of the uterine sound, in aid of the speculum, we may attain to a reasonable degree of certainty in the diagnosis of this affection. I commenced making this application of the sound in 1843, when Sir James Simpson published his "Memoir on the Uterine Sound."* I was soon convinced that internal metritis exists in many cases of uterine diseases, and that my failure to cure some of the patients under my charge by treatment addressed only to the neck was owing to the persistence of the untouched, deeper-seated inflammation. The evidence furnished by the uterine sound is the same in kind as that which proves the existence of inflammation in the cervical cavity, namely, the expansion of the cavity, and its becoming more or less open, as does also its external orifice, these changes being nearly the constant result of the inflamma-

*London and Edinburgh "Monthly Journal of Medical Science," June, 1843.

tion. Dr. Bennet has pointed out these anatomical changes with his accustomed fidelity. The sound, even a large-sized one, is freely admitted into the dilated cervical canal; but, if the inflammation be limited to it, the instrument is arrested at the os internum. But if, on the contrary, the inflammation extends into the cavity of the body, it is likewise expanded, the barrier at the os internum is broken down, and the sound is easily admitted to the fundus uteri. The sound may, moreover, be freely turned about in all directions, as if the walls of the cavity were relaxed and offered no resistance to the movements of the instrument. On withdrawing the sound, mucus or mucopus is seen to issue from the external orifice of the uterus, and where the mucous membrane is much congested or abraded blood flows more or less freely. It is my practice, in all cases of uterine disease in which the speculum is employed, to explore the cavity of the uterus with the sound; if it is arrested at the os internum, no force should be used to pass it completely, and no harm is done; if, on the contrary, it glides into the cavity, and may be freely moved about, the diagnosis is more complete, and the range of therapeutic measures is extended.

When, in 1843, I became satisfied that internal metritis is not infrequent, and may be revealed by the method of exploration which has now been described, topical medication seemed to me as essential as in inflammation of the os and cervix uteri. The only question to be considered was, whether the cavity of the body of the uterus would tolerate such treatment as safely as that of the cervix. This question had been discussed in France with much ability, and decided in the affirmative, clinical experience having proved that solutions of the various remedies employed in the topical treatment of the cervix may be injected into the uterus not only with safety, but with salutary effects. I determined, therefore, to make trial of intra-uterine injections; with what success, and why discontinued and a substitute adopted for them, will appear from a quotation which I will presently make from lectures which I delivered in the University of Louisville to the medical class, session of 1854–5.

These lectures were on "The Pathological Importance of Ulceration of the Os Uteri," and were published in the "Western Journal of Medicine and Surgery," in the numbers for January, February, and March, 1855; several hundred copies of them were put up in pamphlet form and distributed in this country and in Great Britain. The occasion of them was the Croonian lectures of Dr. Charles West, of London, on the same subject, the obvious design of which was to undervalue ulceration of the os, and make it appear to be an insignificant lesion, undeserving the importance which had been attributed to it by Dr. H. Bennet. A perusal of my lectures will show that, while I agree with Dr. Bennet in the pathological estimate which he places upon inflammation and ulceration of the os and cervix uteri, I dissent from his views of internal metritis, and maintain that it requires and bears topical treatment as well as do the os and cervia. It was in this incidental way that I was led to communicate the results of my clinical observations on intra-uterine medication, which else I might never have communicated to the Profession in writing, though I had for many years promulgated them in my lectures.

As my lectures in reply to Dr. West are out of print, and probably have not been read by one in a hundred of those who may read this retrospect, I will make a quotation from them to show what were my opinions and practice at the date of their publication:

"But suppose, for argument's sake, the neck and its diseases as unimportant as Dr. West will have them, how shall chronic inflammation of the lining membrane of the body be treated? Are constitutional remedies adequate to its subdual? or is it beyond the reach of topical medication? These are important questions, not mooted by Dr. West, and if, in answering them, it shall appear that this portion of the organ is accessible to topical remedies, and that its diseases may be ameliorated or eradicated by them, when constitutional treatment alone is unavailable, the speculum will maintain its ground notwithstanding his covert attack upon it. From the whole tenor of his

lectures, we may safely infer his repugnance to the speculum, and we may confidently predict that those who share his antipathies will feel themselves wonderfully braced by the perusal of them. If other evidence of this disguised repugnance were wanting, we might point to his studied silence respecting all that has been proposed and done, in the way of local medication, with a view of curing affections of the uterine body, notoriously rebellious to every form of constitutional treatment. For aught that appears to the contrary in his lectures, it is only necessary for disease to nestle in the *corpus uteri*, in order that it may be safe from the encroachments of the speculum and enjoy an indefinite incubation.

"M. Melier is the first writer, so far as I know, who recommends pursuing inflammation to its innermost recess in the cavity of the uterus. The main design of his memoir, cited in my second lecture,* was to prove that the uterus, though belonging to the class of internal organs, may be made, to all therapeutic intents and purposes, an external one, and that, by means of the improved speculum employed by him, its diseases may be treated locally with the same precision and effect as external or surgical affections. The speculum used by him was a metal conical tube with a wooden stopper, terminating at one of its extremities in a round or conical head that projects some lines at the small aperture of the tube, while the other extremity projects also in the form of a handle—a kind of instrument novel at the time, but familiar with every one at present. In the treatment of chronic inflammation of the os uteri and ulcerative disease of its exterior, M. Melier attached great importance to local baths, simple or medicated, administered through the speculum, and dressings of divers unguents spread on lint and applied to the affected part. These local baths and dressings he directs to be repeated every day or two—the bath to be continued fifteen to thirty minutes, and the dressing to remain till it is replaced by another. He affirms that prompt cures

* Mémoires de l'Académie Royale de Médicine, tome ii., p. 330. 1833.

were obtained by such treatment, in cases that had proved wholly intractable to ordinary remedies.

"When, however, there was inflammation of the lining membrane of the neck (so graphically described by him, as we have seen), extending, as he surmised, in some cases, into the body itself, applications to its exterior merely were found inefficacious, and hence he was induced to make trial of local remedies applied to the interior. To accomplish this, he made use of a hydrocele syringe with a gum elastic tube, which was introduced into the cervix a short distance above its external orifice, with a view of injecting its cavity, first with simple water to absterge it of its viscid mucus, and then with aqueous solutions of medicinal agents, according to the indications to be fulfilled. He had reason to believe that the entire cavity of the womb was injected by his procedure. Sometimes there was reflux of the injected fluid before the tube was withdrawn; in other cases, it was retained until expelled by uterine contraction, accompanied with sharp pain of transient duration, followed by no accidents or dangerous consequences. M. Melier reports favorably of these uterine injections, though he states expressly that the cases in which they were employed were very protracted and difficult to subdue—a confession which proves his good faith to the satisfaction of every one practically conversant with such cases.

"Since the publication of M. Melier's memoir, injection of the uterine cavity has been resorted to by many practitioners, some of whom profess to have obtained satisfactory results from it, whilst others question its safety as well as its utility. In 1840, M. Vidal (de Cassis), who is a great champion of the practice and has charge of a female hospital in Paris, the *Lourcine*, published an essay on the subject,* in which he endeavors to account for the different results and conflicting opinions, which he ascribes to—

"1st. Difference of procedure.

* "Essai sur un Traitement Méthodique de quelques Maladies de la Matrice."

"2d. Errors of diagnosis.

"3d. An erroneous interpretation of the symptoms consequent to these injections.

"To obviate the objection that there is danger of the injection passing along the Fallopian tubes and thus penetrating into the peritoneal cavity, he performed a number of experiments on the dead body, characterized, according to the manner in which they were performed, as—

"1st. Forcible injections.

"2d. Abundant injections.

"3d. Moderate injections.

"It would not be interesting or instructive to transcribe the details of these experiments; their results may be briefly expressed. The subjects were women of different ages, most of whom had borne children. In some, the uterus and its appendages were left in their natural connections; in others, they were removed from the body. Both large and small syringes were used for the injections, with long canulas inserted in the mouth of the womb, secured, in some, by ligatures around the cervix to prevent reflux of the fluid. *When a large syringe was used, and the injection was made forcibly or abundantly, it often penetrated into the uterine veins, and sometimes exuded by one or both Fallopian tubes. When, however, the injection was made with a small syringe, and, of course, in moderate quantity and with little force, it always returned by the mouth of the womb by the side of the canula, and never passed into the Fallopian tubes or reached the peritoneal cavity.*

"These experiments indicate, as M. Vidal thinks, the kind of injections which ought to be made in the living, and, accordingly, he recommends for the purpose a *bivalve speculum, a small syringe*, not containing above twenty grammes of liquid, and a *small silver canula*, with several little holes in its bulbous extremity. Care is to be taken to expel the air from the syringe, and other precautions are also inculcated by him, such as—

"1st. Injections ought not to be practiced three days before the approach of the menses or three days after their cessation.

"2d. They ought to be deferred six months after accouchement or abortion.

"3d. They ought to be taken on an empty stomach (la femme devra être à jeun). M. Vidal, moreover, usually prepares the patient for these injections, which he distinguishes as *intra-uterine*, by injections thrown with great force from a large syringe on the os uteri, having previously exposed the part by the introduction of a bivalve speculum, and this is his *intra-vaginal* injection. External affection of the cervix he treats by *intra-vaginal* injections, which may be repeated daily, and his favorite injection of this kind is a decoction of walnut leaves. The *intra-uterine* injections are not repeated so frequently, and a weak aqueous solution of iodine and the iodide of potassium, viz., a half-grain of the former and one grain of the latter to the ounce of water, is most commonly preferred by him.

"The *effects* produced by uterine injections are, according to M. Vidal, very variable. Some females experience no pain, either immediate or consecutive, whilst others complain, at the moment, of a burning sensation in the womb or pain in the iliac regions, which either gradually abates or increases in intensity. If no pain is felt at the time, the patient may be attacked with a violent abdominal pain or colic, an hour after the operation, accompanied with so much tenderness and febrile reaction as to simulate peritonitis, for which it has been mistaken; but M. Vidal insists that the phenomena are purely nervous, and will subside in a day or two, without the employment of antiphlogistic remedies, which, indeed, do not even abridge their duration. Dr. Ashwell is of a different opinion. In his chapter on leucorrhœa, he relates several cases of what he deemed hysteritis consequent to uterine injections of a mild kind; in one of them nothing but tepid water was used, which, however, was followed by such 'marked evidence' of hysteritis, as to call for bleeding, both general and local, purgatives, fomentations, and a strict antiphlogistic regimen.*

* "A Practical Treatise on the Diseases peculiar to Women."

"In my own practice, I have not resorted to uterine injections for the last several years, having been deterred from their employment by the violent and apparently alarming symptoms which were occasioned by them in a few of my cases. The symptoms were sudden, severe pain in the uterine region, accompanied with cramps, coldness of the extremities, and depression of the pulse. Brandy and laudanum, repeated at short intervals, together with frictions and sinapisms to the extremities, afforded relief in the course of a few hours, and no injurious consequences ensued. But I was reluctant to incur the risk of such sudden alarms and agitations, even for the sake of all the benefit that might be expected from the practice. This was the more to be regretted, as I had unequivocal evidence of the efficacy of the treatment where it could be borne without these alarming effects.

"Considering the subject in all its bearings, it occurred to me that such sudden and violent symptoms must be owing more to the *mode* in which the remedies were applied than to actual intolerance of the internal surface of the uterus. Acting upon this view, instead of abandoning the use of topical remedies altogether, I began to introduce them upon strips of lint, pushed into the uterine cavity with a probe or sound. I first applied the nitrate of silver in this way, notwithstanding that experience had taught me that a weak solution of it—two grains to the ounce of water—injected into the uterus, might be followed by the alarming symptoms that have been detailed. I used, in commencing, a very weak solution, carefully prepared by the apothecary, and, finding that it caused no more pain than an ordinary cauterization of the os uteri, I was emboldened to make it stronger and stronger, until I ceased to have it prepared by weight and measure, but took a strip of lint, wet it thoroughly with water, and passed the stick of caustic over it till it was imbued with, as I judged, a saturated solution. I have cauterized the internal surface of the womb in this manner, in quite a considerable number of cases, without any of the alarming consequences incident to intra-uterine injection. No

practitioner hesitates, in cervicitis, to push the nitrate crayon into the neck to cauterize the whole extent of its internal surface. Experience warrants me to declare that we may, with as little hesitation, treat the internal surface of the body in the same manner, only a saturated solution is preferable to the stick, on account of its liability to break and be retained in the cavity—an accident which sometimes happens in the neck. All the local remedies that are had recourse to in affections of the neck may be applied in the same way to the body, not excepting even the *potassa cum calce*, as intimated in my first lecture, though, to avoid being even the remote cause of mischief, I must say again that so powerful an article needs great circumspection in its use; it should be applied only for a few seconds, lest it burn deeply and produce irreparable lesion of the organ. Either as an application to the *interior* of the neck or the body, it must be allowed to be a most unsafe remedy in careless or unskillful hands. It may be objected that an article so potent and liable to abuse ought not to be used at all in the treatment of uterine diseases. To this I reply, that inflammation of the genital mucous membrane is sometimes so inveterate, especially when associated with enlargement and induration of the organ, that no milder means will make any remedial impression upon it. The effects of this agent in such cases, when it is judiciously managed, are indeed admirable. Under its transforming influence, the inflammatory vice is eradicated, probably by the dissolution of the old membrane and the production of a new one, while the deeper-seated tissues are restored to a healthy or, at least, to a healthier condition.

"A word or two of explanation may be needed in regard to the manipulation I practice. The only instruments necessary are a bivalve or tubular speculum, and a Simpson's uterine sound, slightly bent at the first knob, two and a half inches from its point. The speculum being properly introduced, take a strip of lint four or five inches in length and about a quarter of an inch in breadth (narrower or wider according to the patulousness of the uterine canal), and, after saturating it with the

solution to be applied, take it by one of its extremities with the speculum forceps, and lay it upon, or a little within, the os uteri. Then insinuate the sound into the uterine orifice, carrying the lint before it, and introduce it rapidly into the cavity, lest the contraction excited by the application should offer some impediment to its complete introduction. When the sound is inserted the whole length of the cavity (about two and a half inches) one extremity of the lint will be pendent at the uterine orifice, and by this it may be easily extracted by the forceps, should it chance to remain in the cavity, after the withdrawal of the sound. The lint may be held in the uterus a minute or two, when any article is used except the *potassa cum calce*, and its contact with every part of the cavity may be promoted by turning the sound a few times on its axis."

Again, in my work on obstetrics* there is a lengthy chapter on abortion, in which inflammation and ulceration of the os and cervix, and also of the mucous membrane of the cavity of the body of the uterus, are considered as among the most frequent causes of abortion; and, under the head of prophylactic treatment, it is insisted on that the cure of the uterine disease is indispensable to the prevention of abortion.

This proposition led me to discuss pretty fully the treatment of inflammation and ulceration of the neck, and also of the body of the uterus, the latter being regarded by me as of frequent occurrence. The treatment of internal metritis is thus expounded by the same quotation from my lectures as that which has just been introduced into this retrospect. And then the following additional remarks are made:

"Since that date (meaning 1855, when my lectures were published), I have cauterized the cavity of the uterus a great many times, not only with the nitrate of silver, but also with creosote, sulphate of copper, tincture of iodine, and even with the acid nitrate of mercury, without any more pain than attends cauter-

* "Principles and Practice of Obstetrics: Including the Treatment of Chronic Inflammation of the Uterus considered as a Frequent Cause of Abortion." By Henry Miller, M. D. Philadelphia: Blanchard & Lea. 1858.

ization of the cervix, and without any evil consequences whatever. My own multiplied clinical observations compel me to dissent from the prevalent, if not universal, opinion that the cavity of the body of the uterus is a sanctum, which is much more sensitive than the neck, and will not brook any form of therapeutic approach—an opinion with which even Mr. Bennet is strongly imbued. I say again, that I have not found it so; but, on the contrary, I treat the cavity of the body topically as familiarly and with as little apprehension as I do that of the neck. It will be esteemed paradoxical that a cavity which will not bear the injection of a solution of the nitrate of silver, of the strength of two grains to the ounce of water, will, nevertheless, bear to be cauterized with a saturated solution after my method—and so it doubtless is; it does not, however, concern me to explain paradoxes, but only to avouch facts, which can be confirmed or refuted by others. The paradox in this instance will, I suspect, find its solution in the peculiar anatomical circumstances of the uterus, in the fact of its being the medium of opening a communication with a great serous cavity, that of the peritoneum, through the Fallopian tubes—the only example in the whole animal economy of a serous cavity communicating with another lined by a different kind of membrane. Through these apertures it is not unreasonable to believe that fluids injected into the uterus may find their way and excite peritoneal irritation or inflammation. It is true that the experiments of Vidal, already referred to, appear to negative this supposition; but these experiments, it must be remembered, were performed on the *dead* body, and the inferences deduced from them may, therefore, be wholly inapplicable to the living, in which vital motions may convey even the smallest quantity of fluid far beyond the point to which it is artificially projected. But whether a drop of the fluid of intra-uterine injections can penetrate through the Fallopian orifices or not, the fact remains that this kind of topical medication is pregnant with danger, whilst that which I have recommended is innocuous.

"The safety of intra-uterine cauterization being established,

we are concerned to inquire into its therapeutic value, and I have no hesitation in affirming that it is as efficacious in subduing inflammation, in its various grades here as elsewhere. In scores of cases, where it had either been overlooked by others or deemed inaccessible, I have been enabled successfully to combat it, chiefly by local treatment.

"The ulterior results of the topical treatment of endo-uteritis have appeared to me to be as satisfactory as those usually obtained in cases of inflammation of the os and cervix uteri.

"To facilitate the introduction of medicinal agents in a state of solution, I often make use of a little instrument which might be called a fluid porte-caustic. It is made of steel, and consists of two branches springing from a common stem, which diverge abruptly at their origin, and then run parallel with each other to their termination. The extremity of each branch is dentated, the teeth of one fitting into those of the other, so that, when they are closed by a sliding ring, they present a smooth and roundish point, like that of the uterine sound. The whole instrument measures nine inches and a half in length, and the handle is made rough on the side, corresponding to the concavity of the branches. A pellet of lint or cotton is placed between its branches, so as to project slightly at its point, which, being secured by a sliding ring, is wet with the medicated solution, and introduced into the uterus through the speculum, used for ocular sounding."

Having reviewed my own treatment of internal metritis, I may be allowed to ask, Who is entitled to priority in the practice of intra-uterine medication in this country? If my acquaintance with our medical literature is not defective, I am myself entitled to that precedence.

Our literature is not rich in works on the diseases of women. That sterling old treatise of Dr. Dewees's on "Diseases of Females," which passed through so many editions and was for so many years without a competitor, was written before the improved methods of investigation came in vogue, and of course nothing bearing on our subject is to be looked for in its pages.

"Females and their Diseases: A Series of Letters to his Class," was given to the world by Dr. Charles D. Meigs, in 1848, three years after the publication of Dr. H. Bennet's little book on "Inflammation, Ulceration, and Induration of the Neck of the Uterus." But herein, where it might have been expected that the speculum would have shed some light, we find none whatever from that source; yet Dr. Meigs, on page 138, tells his class that Dr. Bennet's work is very well worthy of their regard, "for it contains many cases of uterine disorders that were prudently, sagaciously, and successfully treated.

Subsequently, namely, in 1853, Dr. Meigs presented an elaborate "Report on the Acute and Chronic Diseases of the Neck of the Uterus" to the American Medical Association, which was published in their "Transactions," vol. vi.; but this report contains nothing concerning internal metritis, and, of course, nothing concerning intra-uterine medication. If it be said that Dr. Meigs could not have embraced it in his report without transcending the limits assigned him, it may be answered that he treats at some length of polypus of the body of the womb, being constrained, as he says, to present some remarks upon cases of this kind, "inasmuch as they greatly interest the cervix of the uterus." It is difficult to see why polypus of the body of the womb should interest the cervix more than internal metritis should; nay, cervicitis and internal metritis being cognate affections, and not unfrequently coëxistent, the one ought naturally to suggest the other. The truth is, that internal metritis does not appear to have attracted the attention of Dr. Meigs.

We have no other treatises on diseases of women, besides Dewees's and Meigs's, which were published prior to 1855. If we turn to our periodical medical literature, we shall find, at least I have found, nothing either in the form of an essay or recital of cases, or even of a single case, of topical treatment of internal metritis prior to the year of 1855, the date of the publication of my lectures, or even the year 1858, when my work on "Obstetrics" was published. Considering that Dr. Bennet's

writings were in the hands of all our practitioners who take an interest in this branch of practice, and that very many of them were, after 1845, engaged in the treatment of diseases of the os and cervix, the oversight of the body of the uterus might be deemed strange, if Dr. Bennet had not himself discouraged local treatment as applied to the body of the uterus. If we consult his chapter on internal metritis, we shall find the following opinions expressed:

1. That internal metritis is "generally subdued by the means adopted to cure inflammation of the cervix or of the cervical canal, which almost invariably accompanies it."

That slight internal metritis may subside after the restoration of the cervix to a healthy condition, I will not deny; but that, in cases of a graver character, attended with hæmorrhages, a spontaneous cure may take place, I can no more believe than that intense inflammation of the cervical cavity may cease without local treatment.

2. Should the internal metritis persist, "the solid nitrate of silver can be easily used by means of an instrument similar to that which is used to cauterize the urethra. Its application is exceedingly painful, and is generally followed by a copious exudation of blood, sometimes quite amounting to a flooding."

Indeed, the pain produced by the cauterization of the lining membrane of the uterine cavity, under any circumstances, is represented by Dr. Bennet as nearly always great, long continued, and attended with much general disturbance of the system. Solutions of nitrate of silver injected into the uterus, which have been much used on the Continent, would no doubt do much good, Dr. Bennet thinks, were they safe; but there is reason to believe that they are not safe, and, consequently, he never resorts to them. Several deaths occurred in Paris during his residence there from metro-peritonitis brought on by their use. One occurred in the female ward of M. Jobert, at the Hôpital Saint Louis, and under Dr. Bennet's own care, as he was then house-surgeon.

3. "Sometimes," says Dr. Bennet, "internal metritis is so ob-

stinate that even the use of the solid nitrate of silver does not remove the morbid action. I have, in cases of this description, carried the acid nitrate of mecury, pure or diluted, into the uterine cavity, and thus succeeded in reëstablishing healthy action and curing the disease. I never have recourse to this means of treatment, however, except as a last resource." And then, he adds, with the effect, no doubt, of terrifying his inexperienced reader and driving far away from him the idea of such venturesome practice, "The cavity of the uterus bears surgical interference less than any other uterine region; its cauterization being nearly always attended with extreme pain, nausea, or even sickness, copious hæmorrhage, and considerable febrile reäction."

Many years ago, I dissented from these averments of Dr. Bennet, as will be seen by referring to the quotations from my lectures introduced into this retrospect; and it must appear obvious to the least reflecting that, if these averments had not been refuted, there could have been no progress in the treatment of the diseases of the uterine cavity.

To complete this retrospect of the pathology and therapeutics of uterine diseases in the United States, I will now briefly notice the treatises and medical journals that have been published since 1855.

The first of the treatises in the order of their dates is Dr. Hodge's.* In it we find a distinct recognition of internal metritis: "Doubtless," says Dr. Hodge, "the inflammation frequently extends along the canal of the neck to the internal os uteri, and occasionally to the cavity of the uterus. In the diagnosis of this complaint, but little assistance is to be derived from the speculum; for there are no visible signs, except the appearance of inflammation of the os uteri, and of purulent and lymphatic discharges." (p. 84). Dr. Hodge's diagnosis appears to me to be very imperfect and unsatisfactory, nor is his treatment to be more commended, for he remits the disease to "rest,

* "Diseases peculiar to Women, including Displacements of the Uterus." Philadelphia. 1860.

warm vaginal washes, solutions—with or without laudanum or morphia—of borax, of alum, of the sulphate of zinc, of the sulphate of copper, of the nitrate of silver, of iodine," etc.; and if these remedies, which can have no direct action on the seat of the disease, fail to cure, the patient is to have the benefit of a pessary.

Dr. Byford* recommends a thorough exploration by the speculum and uterine sound, and, when internal metritis is found, the application of the remedy, chiefly the nitrate of silver in stick, "up to the fundus inside the corpus uteri!" Again he says: "Should the disease extend inside of the os and cavity of the cervix, it (the nitrate) should be fearlessly but carefully carried up to the full extent of the disease."

In his larger work† Dr. Byford repeats his recommendation of the same practice in obstinate cases of menorrhagia, dysmenorrhœa, and subinvolution of the uterus. To make a more powerful impression on the diseased mucous membrane, he even leaves a small piece of the nitrate in the cavity to dissolve and diffuse itself. When the nitrate of silver does not succeed, he uses the acid nitrate of mercury, creosote, tincture of the chloride of iron, etc., with the whalebone probang.

Dr. Thomas's work,‡ the most erudite and complete of all that have appeared in this country, discusses very fully the subject of chronic internal metritis, or, as he chooses to denominate it, "chronic corporeal endometritis."

Dr. Thomas observes: "There are four methods by which it (cauterization of the cavity of the uterus) may be practiced: 1st. By the use of solutions painted over the surface; 2d. By ointments left to melt in utero; 3d. By injections of fluid into the cavity of the body; 4th. By solid caustics." He then gives minute directions for carrying out this kind of practice. The use of

* "Treaties on the Chronic Inflammation and Displacements of the Unimpregnated Uterus." 1864.

† "The Practice of Medicine and Surgery applied to the Diseases and Accidents incident to Women." Philadelphia. 1865.

‡ "A Practical Treaties on the Diseases of Women." Philadelphia. 1868

solutions painted over the surface appears to be preferred by him, and he gives a number of formulæ for them. The method of applying any of these solutions is, wrapping a probe with a thin film of cotton, dipping it into the fluid caustic which is to be used, passing it directly to the fundus, and keeping it still for from thirty seconds to a minute. Dr. Thomas informs us, "This method of employing fluid caustics is that introduced into the Woman's Hospital in this city, by Dr. Sims, and surpasses any other with which I am familiar."

As the date is not given by Dr. Thomas when Dr. Sims introduced this method of employing fluid caustics to the cavity of the uterus, it might be supposed, by those who are ignorant of the age of the Woman's Hospital, that it was original with him. To rebut such a supposition, I have only to call to remembrance the fact that the Woman's Hospital was founded in 1855, the identical year in which my lectures were published, wherein substantially the same method of applying fluid caustics was recommended and spoken of as having been used by me for many years. It is no disparagement to our distinguished countryman, Dr. Sims, to add that, in 1855, he was unknown as a uterine pathologist, his reputation resting then solely on his marvellous success in the operation for vesico-vaginal fistula.

But, after all, trivial details as to the mode of conveying fluid caustic into the cavity of the uterus are unworthy of dispute; the only important point is, the extension of the range of our therapeutics by the discovery that the cavity of the body will bear active local treatment as well as that of the neck, and this discovery I claim to have made by clinical experiments, many years before any other practitioner in this country ventured to essay such treatment. "I have always treated the uterine cavity with great respect," says Dr. Henry Bennet,* and American practitioners, until recently, have excelled Dr. Bennet in their respect for it, not venturing beyond its vestibule, the os and cervix. Nowadays, they have laid aside this respect, and do

* "Review of the Present State of Uterine Pathology." London. 1856.

not hesitate to enter the uterine cavity, without so much as saying "by your leave," and treat it with the same familiarity as they treat the neck.

Whence this boldness? I venture to affirm that it has sprung up since my publications opened the door and bade them to enter in.

The treatment of internal metritis by the intra-uterine injection of solutions or tinctures of various medicinal substances has lately been revived in this country. When I say revived, I do not mean that the practice was ever in vogue among us; no one, except myself, so far as I know, had ever made trial of this mode of treatment. Between the years 1843 and 1850, I injected the uterus, many times, with decoction of soot (*carbo ligni*), the favorite injection of M. Téallier,* with diluted tincture of iodine, with tincture of chloride of iron, with weak solutions of nitrate of silver, solution of sulphate of copper, etc. As to the comparative merits of these substances, I found that the decoction of soot had the most salutary effects, and was least liable to cause uterine cramps; the nitrate of silver, however weak the solution, was the most painful, and the sulphate of copper the most efficacious in curing menorrhagic internal metritis. I recollect one case in particular, that of a middle-aged married lady, who never conceived. She had had nearly incessant uterine hæmorrhage for many years, which had resisted all kinds of treatment, but which was effectually cured by a few injections of a pretty strong solution of the sulphate of copper.

The first paper which I find in our medical journals on injections in uterine catarrh, was contributed by Dr. Joseph Kammerer, of New York.† The Doctor lays down certain cardinal rules, the non-observance of which is occasionally followed by those accidents which have caused such a dread of intra-uterine injections in the minds of many.

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* "Du Cancer de la Matrice." Paris. 1836.

† "American Journal of Obstetrics and Diseases of Women and Children," August, 1869, vol. ii., p. 185.

These rules appear to me very judicious, and are as follows:

"1st. Avoid all intra-uterine treatment while there is any irritation or inflammation in the peri-uterine tissue, or in the cavity of the body." Of an acute character, I presume, is the meaning.

"2d. Beware of injecting fluids of low temperature into the uterine cavity.

"3d. Concentrated solutions should be injected in minute quantities only (from 10 to 20 drops).

"4th. The entire permeability of the uterine canal shall be established before the injection is made."

The last rule, which is an important one, is complied with by dilating the canal with a set of sounds, four in number, made of copper or German silver, and so graduated that, by their successive introduction, the uterine cavity can be dilated with a moderate amount of force. These sounds are preferred by Dr. Kammerer to laminaria or sponge-tents. The injections are made with an india-rubber long-nozzled syringe, which is introduced nearly up to the fundus, and copious injections of warm water are made to thoroughly cleanse the uterine canal of its secretions as a preparation for medicated injections. The remedies which he generally uses are, chromic acid, Lugol's solution of iodine, and carbolic acid; sometimes sulphate of zinc and pyroligneous acid. These he keeps on hand in concentrated solutions, and applies them either pure or in a diluted form, according to the indications to be fulfilled. Dr. Kammerer's is an interesting and practical paper, and to those who desire fuller information on the subject, I recommend a careful study of it.

Dr. J. C. Nott has a very able paper on the treatment of endometritis by uterine injections in the November number, 1869, of the same journal (vol. ii., p. 470), the distinctive features of which are, disapproval of strong caustic solutions as intra-uterine injections, and the recommendation of mild anodynes, detergent, astringent, or alterative washes, such as tepid water at first, and subsequently solution of morphia, a weak solution of carbolic acid, compound tincture of iodine, much

diluted with water, etc. These he advises to be injected every day or every other day, with an instrument resembling a double catheter, such as surgeons use for injecting the bladder. Such injections, Dr. Nott remarks, cause no pain, are attended with no risk, and are highly salutary. In his hands they have succeeded in the few cases so treated which could not tolerate the probing of the uterus and caustic applications.

Dr. Nott contributed another paper on intra-uterine medication in the same journal for May, 1870, (vol. iii., p. 36), the principal design of which is to investigate by experiments, the chemical action of the salts and acids used in uterine injections upon the mucous secretions and blood with which they come into contact. Albumen is the chief organic constituent of mucus, and it is found, also, in the blood, as one of its organic principles, in the proportion of about thirty per cent. The combination of these acids and salts with the blood and mucus of the genital passages produces instantaneous coagulation of the albumen; a chemical change of some kind takes place, and our remedies are thus, as Dr. Nott contends, neutralized, and the most potent styptic or caustic is rendered powerless for good or for evil.

In his experiments, taking the white of egg as a fair specimen of albumen, Dr. Nott poured two or three drachms of it into test-glasses, in one of which he dropped three or four drops of undiluted liq. persulph. ferri; into another, a like quantity of saturated solution of chromic acid; into another, a like quantity of saturated solution of tannin; into another, a like quantity of saturated solution of nitrate of silver; into another, a like quantity of pure carbolic acid; into another, a like quantity of Churchill's tincture of iodine.

Each one of the above articles (except the iodine) combined chemically with a portion of the albumen, and coagulated it into a small globular mass that remained suspended in the surrounding albumen. "Here is a clear example of chemical combination," says Dr. Nott, "and it is not less clear that the albumen, to a great extent, if not completely, *neutralizes* the

chemical with which it combines. Persulphate of iron loses its styptic taste when combined with blood, and chromic acid its irritating effect on the vagina. Nitrate of silver, tannin, etc., are acted on with equal force by organic principles."

When albumen is coagulated by the various salts, the changes that take place have not, I believe, been definitely determined by chemists. If, in some instances, a true chemical combination takes place, in others it does not; it is not necessary, however, to our present purpose to discuss this question.

The coagulation of the uterine mucus by the various articles that have been enumerated, when used as intra-uterine injections, not only neutralizes them, as Dr. Nott believes, but blocks the catheter and stops the return current. On this account he much prefers the solution or the tincture of iodine, which is not coagulated by albumen, and appears to exert a curative influence when applied in chronic uterine affections superior to that of any other remedy. Cautious as he is in the use of strong injections into the uterus, Dr. Nott says the undiluted Churchill's tincture may generally be employed, and with marked benefit, either in chronic menorrhagia or chronic catarrh.

Ten years before the publication of the papers of Drs. Kammerer and Nott, Dr. C. H. F. Routh, of the Samaritan Free Hospital, London, read a paper before the Obstetrical Society of London,* entitled "Cases of Menorrhagia Treated by Injection or the Removal of the Uterine Mucous Membrane by the Gouge, or both Means Combined."

The dangerous and deadly consequences which have so often arisen from injecting fluids into the cavity of the womb, Dr. Routh argues, are most probably due to rupture of the uterine surface, extending within the veins, and the absorption of the injected fluid; and it hence follows that, if any injected fluid *is not long retained within* the cavity of the uterus, no bad effect will follow. "Experience, however, proves that, if, through any untoward accident, it is so retained, then it will give rise to

* Transactions for 1860, vol. ii., p. 117

intense pain, and, as a result, inflammation may be expected to follow." To provide a free egress for the injected fluid, Dr. Routh inserts sponge-tents of increasing size for several consecutive days, until the uterus is sufficiently dilated to admit the finger to the fundus. Its cavity can then be explored. If any polypoid growths are detected, they are removed with the gouge, and then the undiluted tincture of iodine, simple or compound, or a strong solution of tannin, or tincture of muriate of iron, is injected. Dr. Routh remarks: "With a widely patent os, it is extraordinary what an amount of irritation the mucous membrane of the uterine cavity will bear." Dr. Routh avers that, when sponge-tents have been applied for three or four days consecutively, he has not seen any bad effects follow from the use of injections, and it is to this modification of the treatment by injection that the chief merit of Dr. Savage lies.

The idea of making a free outlet for fluids injected into the uterus is not, then, original with either Dr. Kammerer or Dr. Nott; they only seek to attain the same end by different means, after its value has been proved—Dr. Kammerer dilating the uterus with his sounds of increasing size, and Dr. Nott introducing his double catheter. These means, it must be confessed, are much more pleasant and expeditious than sponge-tents, and ought to be preferred, provided that it shall be proved that they are as safe, but this is doubtful if sponge-tents insure safety in another way, pointed out by Dr. Routh. "The pressure of a foreign body within the uterus," he says, "as in other instances, sets up a certain amount of limited adhesive inflammation in the immediate tissue around, so that an injection subsequently applied does not penetrate within the veins." While with the preliminary use of sponge-tents no bad effects have occurred in the hands of Dr. Routh, Dr. Kammerer frankly confesses that, notwithstanding the full dilatation (by his sonnds) of the uterine canal, the injection of a concentrated solution is immediately followed by energetic uterine contractions, and, if too great a quantity has been injected, the liquid imprisoned in the uterine cavity produces intense colic and other unwelcome symptoms.

"In some instances, the tube of the syringe is so firmly held by the internal orifice that not a drop of liquid can return alongside of it, and a certain amount of force is necessary to withdraw the syringe from the uterine canal." Dr. Kammerer concludes, therefore, that it is preferable *to apply these strong solutions with a brush.*

An application made with a brush is similar to one made with cotton or lint; but I do not think that the medicated fluid can be so well diffused by it over the surface of mucous membrane. In view of this confession of Dr. Kammerer's, I shrink from returning to the use of intra-uterine injections, which I have long since relinquished, unless the experience of others shall fully confirm the *safety* of the operation after dilatation by sponge-tents, or with the aid of Dr. Nott's double catheter.

But why should we be anxious to prepare the uterus for the safe reception of medicated injections? Experience has proved to my entire satisfaction that, by my method, disease in the cavity of the uterus can be reached and exterminated as effectually as by injections, and this without any risk whatever, and with little more pain than what is produced by an ordinary cauterization of the os and cervix uteri. Doubtless, to convey medicaments into the uterus in this way requires the tact which practice alone can give. The uterine canal, in cases of chronic internal metritis, is usually patent enough to transmit a probe wrapped with cotton or my fluid porte-caustic holding a strip of lint; but, if it be not, it can be readily dilated to the size of a number nine bougie, which is large enough, and then, having previously learned the direction of the canal and noted its flexures, if any exist, the armed fluid porte-caustic or probe can be *rapidly* passed into the uterus, up to the fundus, and moved about in the cavity, with gentle pressure upon its walls, until they are painted over. The size of the wrapped probe must not exceed that of the canal, in order that it may be passed without such resistance as would squeeze the fluid out of it, and, if the uterus is very movable, it should be held with a tenaculum. Before the medicated probe is introduced, the cav-

ity should be well cleansed of blood or mucus or muco-pus by one or more probes of dry cotton until they are withdrawn unstained.

Such is the simple treatment which I have pursued for upwards of twenty years, and with which I have reason to be satisfied, in the ordinary run of cases of internal metritis. But in hæmorrhagic or ulcerative internal metritis, where the patient is reduced to a state of anæmia by the profuseness and constancy of the discharges, and there is reason to suspect profound lesion of the mucous membrane, such as fungous granulations or small polypi, the uterine canal should be fully dilated with sponge-tents, and, if such a state of the membrane be found to exist, its surface should be abraded with the curette until roughness can no longer be felt, and then it should be well cauterized with undiluted tincture of iodine. In the dilated condition of the parts, there is no difficulty in conveying into the cavity, on cotton or lint, the tincture in sufficient quantity to paint the whole surface. These cauterizations should be repeated every four or five days.

Dr. Nott is a little facetious in his description of my method of medicating the cavity of the uterus. I quote it as follows: "The curved probe or glass rod, armed and introduced as above described, in passing along through the cervix uteri, must necessarily have most of the fluid brushed off in the cervical canal: what little remains on the instrument is rubbed over the uterine cavity, where not more than three or four drops are dabbed about on a surface coated with mucus, or the probe (if the uterus be flexed) may pass into a puddle of albuminous fluid. In either case the remedy is *neutralized* by chemical reaction." And so he goes on further about the obstacles of *flexion* of the uterus, which I need not quote. I answer it all by admitting the frequency of flexion of the uterus, particularly retroflexion, as an accompaniment of its pathological states, while I contend that this is one of the strongest arguments in favor of my method. When there is retroflexion accompanying internal metritis, I invariably rectify it with the sound, as a

part of the preparation for cauterization, and immediately upon the withdrawal of the sound pass in the armed probe, with its curvature forwards, so as to cauterize it *in situ;* and should the uterus retrovert again before the probe can be introduced, I use it (the probe) as a sound to replace the uterus, and at the same time to cauterize it. In this way the displacement of the uterus may be corrected, in some cases, by the time its inflammation is cured.

A word or two in regard to the practical bearing of Dr. Nott's chemical experiments with albumen and the salts and acids used as topical remedies in uterine diseases, will conclude this retrospect. Whether in their combination a true chemical change takes place or not, is, in my opinion, therapeutically immaterial. In so far as the coagula clog his double catheter and hinder the escape of the fluid part of the injection, danger may arise. But if the uterine canal is widely opened by spongetents, after the manner of Dr. Routh, the fluid portion of the injection will certainly escape, and, if the neutral coagula should be retained, they can do no harm, and will be expelled by the uterus in the course of a few days. Nor can the remedial effects of the injections or the applications, made after my method, be counteracted by the coagulation of mucus or blood, provided that the cavity is properly cleansed preliminarily to the treatment.—*American Journal Obstetrics.*

ART. II.—TEMPERATURE OF THE BODY, IN HEALTH AND DISEASE, AS MEASURED BY THE THERMOMETER. By W. H. SHARP, M. D., of Volcano, W. Va.

During the past year, having paid considerable attention to the subject of the temperature of the body in health and disease, as measured by the thermometer, I thought it not inappropriate to give you a sketch of that important subject, so new to the vast majority of the Profession. This is my apology for intruding upon your attention.

Of course, preternatural heat, being so marked an accompaniment of acute diseases, it was duly estimated by most physicians from the time of Hippocrates; still, during the middle ages, it was partly lost sight of, and it was not till the middle of the sixteenth century that it was suggested to estimate it by the only accurate method, *i. e.*, by instruments.

Sanctorius, who lived in the early part of the seventeenth century, was the first to use the thermometer for this purpose, but it seemed to attract but little attention; when, nearly a century later, Böerhaeve, with more improved means, gave attention to the subject. His pupils, Van Sweeten, who was Professor in the University of Vienna, and De Haen, continued his studies, more particularly the latter, in whose works we find many observations upon the subject. Still it attracted but little attention, some few, in England, giving some attention to the subject, among whom were Marten, John Hunter, and James Currie.

About the year 1830, the matter was again brought into notice in Germany. In England it seemed to have been forgotten, for in the standard text-books on the practice of medicine of that period, no mention of it can be found, even all memory of what had been done seemed to have been forgotten. In Good's "Study of Medicine" you will find short notices of the various opinions, theories, fancies and schools which had risen and fallen, with sketches of their founders, but no mention of the use of the thermometer.

So the matter stood till a very few years since, when it began to be studied in Germany. Facts and numerous observations were accumulated by a few indefatigable observers, and gradually the science of Thermosophy was founded.

Who were these founders? Barensprunge, Traube, Wünderlich, in Germany; Trousseau, in France; Davy, Compton, and Ringer, in England. But to Wünderlich, more than to any other, belongs the honor of giving a firm foundation to the study—he first giving the result of his studies in his "Hand-Book of Pathology and Therapeutics," and, later, in his work

entitled "The Course of Temperature in Disease; a Guide to Clinical Thermometry."

English students are largely indebted to Aitken for their knowledge of the subject, he insisting upon its importance in all the later editions of his work on Practice.

Scattered through the journals will be found notices and reviews upon the subject, the best of the latter being the review of Dr. J. C. Reeve, found in "Hay's Journal," 1869, and to which I am much indebted.

Still, it is within the last five years that it has attracted much attention. In most of our standord text-books on the practice of medicine, both English and American, we find but little or no mention of the subject. While attending lectures, during the years 1863 and 1865, I have no recollection of the subject ever having been mentioned, and never saw a thermometer used, either in hospital or private practice.

It was necessary, of course, to determine by a large number of experiments upon healthy individuals, what the normal temperature of the human body is, under what conditions it varies, and the amount of variations.

In man, the average may be placed at 98.6F°. In birds, the mean temperature ranges from 110°F. in the swallow to 100°F. in the gull. In mammalia, from 105°F. in the squirrel to 95°F. in the ape. In the toad, 51.6°. In fish, 51° to 52°.—(Dalton).

Roger, as quoted by J. Louis Smith, gives the average in children under seven days old, at 98.6°, and from that to fourteen years, at 99°.

Finlayson ("American Journal Medical Sciences," April, '69,) states that the daily range in healthy children is greater than in healthy adults, being 2°F. in children and 1°F. in adults.

Aitken gives the average in adults to be 98.4°, or a few tenths more or less, and that a *persistent* elevation above 99°, or below 97.3°, to be sure signs of disease.

Dr. Compton (Braithwaite, 54,) considers that the temperature of 98.4° to be too high, and the average he considers to

be normal to be between 95.5° and 98.4°, the most frequent being 97.4°.

Wünderlich says that from 98.1° the range is very limited.

Dr. John Davy's tables (Aitken) gives the variation in the temperate region to be about 80.100°. That in the tropics, the same diurnal range, is 90.100°. In the former, being at its minimum at midnight, its maximum in the morning; while in the latter it is at its maximum at night, and its minimum in the morning, the average the year around being 98.4°, the atmospheric temperature being 55.5°.

From numerous observations made upon those in health and those not suffering from acute febrile disease, I would put the normal temperature in health to be 98.5°, that being a good standpoint from whence I mark any departure.

Below 97.3° is suspicious, above 99.5° the domains of fever are entered upon; within that limit the man may be healthy; is not suffering from any acute febrile disease, or when inflammatory changes are taking place, no matter what the circumstances are under which he is placed. Let there be a departure from that range, which is not temporary, and there is some departure from health.

Certain collateral circumstances may cause a slight deviation from health, and may be thus enumerated: 1st. Acute exercise, not carried to the extent of exhaustion, causes an increase; 2d. Exposure to cold causes a *decrease;* 3d. Protracted mental exercise, a decrease; 4th. A full meal and alcohol, before being digested, a decrease; 5th. Increase of atmospheric temperature, a slight increase.

As illustrations of the depressing effects of alcohol, see the temperature reported in cases published by Dr. DeMannon, ("New York Medical Journal," December 1870), where there were fatal results after over-doses of that poison; also Ringer's experiments on healthy and unhealthy persons; alcohol in the former causing a depression of from 3° to 5°, in the latter a slight depression also. (Braithwaite, No. 54).

The correlation of pulse and temperature should be observed.

It may be stated thus: An elevation of one degree of temperature corresponding with an increase of ten beats of the pulse. But this rule will not hold good with children, I think; but this is a question still undecided. We all know how easily the pulse and respiration are affected in children. J. Lewis Smith, in his work on diseases of children, gives some interesting tables of these variations, to which I refer you. Finlayson states that there is no definite relation between the frequency of pulse and respiration and the range of temperature, while Wünderlich states that the temperature is more easily influenced by accidental influences; that in disease the same elevations need not excite alarm that they would in adults, but necessitate careful watching. We want these facts determined: How far do exercise, crying, movements, etc., effect the temperature in infants? In the same ratio that they do the frequency of the pulse and respiration?

As before said, let there be a departure from the state of health, and there will be a departure from the range of temperature found in health.

The several idiopathic fevers and certain inflammatory diseases show a range of temperature peculiar to each disease, that is, that there are certain typical ranges for typical cases, and any departure from the typical course of the disease, will be marked by a corresponding departure from the typical ranges of temperature.

Before proceeding further, it will be best to note those generalizations which have been deduced for application to all cases; stating from what authorities derived, using the language as far as possible:

"The maintenance of a normal temperature within the limited fluctuations before noticed, gives the complete assurance of the absence of anything beyond local and unimportant disturbances; but any acute disease, however slight, elevates the temperature, and is some criterion of the intensity of the disease." (Aitken).

"Any continuous elevation above the standard laid down

98.4°F., indicates disease. When considerable, say from 101° to 105°, the febrile phenomena are severe, and when above 105°, the patient is in imminent danger; above 106° to 108°, a fatal result may be looked for. (Aitken.)

"In moderate fever, the mean temperature of the day does not rise above 38.5°C., (101.3°F.), with a daily average of between 39° and 40°C., (102.2° to 104°F.), the fever is considerable, if above 41°C., (104°F.), the fever is a high grade." (Wünderlich.)

But very high ranges of temperature are not always serious; they especially occur in intermittent fevers, where rapid rises and falls of temperature are the rule. If, however, these extreme elevations are present in diseases which are malignant in type, they must be received as of evil import in proportion to the elevation attained, and act as criteria by which to estimate the amount of malignancy present.

In diseases which are non-febrile, as tetanus, we often find great elevations of temperature, and such are to be received as the forerunners of death.

In children these rapid and extreme elevations of temperature oftentimes occur in diseases which are of short duration, the rise being rapid, and the decline equally as sudden. These rises put us on our guard, and oftentimes prompt us to adopt decided medication, yet should not give us the same anxiety as if occurring in adults. This was well exemplified by a case in practice. A child, three years old, suffering from acute bronchitis, with congestion of the lungs, pulse 160, respiration 50, temperature 104.5°F. I felt somewhat anxious; ordered warm bath and gave verat. virid. to reduce arterial excitement. Next visit found the child quite easy; pulse 108, respiration 36, temperature 99°F. On the third visit most of the acute symptoms abated; slight cough; gave expectorant mixture, and enjoined careful watching. Had the same state of affairs occurred in an adult, I would have had, in all probability, a much more serious attack to contend with.

While single observations, in febrile diseases, cannot afford

positive evidence of very great value, yet oftentimes they are of service. This rule can be safely adopted: "If, in the beginning of an acute febrile disease, we find the temperature normal, we can exclude lobular pneumonia, variola and scarlatina." If, however, it is elevated, the number of probable affections is increased—viz., the exanthemata, tonsillitis, pneumonia, pleurisy, ephemeral fever, pyæmia, meningitis; but we can with almost certainty exclude typhoid fever." Intermittent fever is not present if the temperature does not reach 105° to 106°F., at the commencement of the febrile stage. If it reaches 107° the diagnosis is doubtful, is also, if it does not become normal in the intermission; when the temperature remains elevated, when the other signs have disappeared, the case is not cured.

During the early days of a disease, if the temperature remains normal in the afternoon, we may suspect intermittent fever, and can with safety exclude the continued fevers, the exanthemata, before the eruption appears. In some of the latter the temperature abates on the appearance of the eruption; in others it does not. Of course the relations of the other symptoms must be observed, especially of the pulse and respiration, the former increasing in frequency in coïncidence with the rise in temperature.

"When the pulse and degree of temperature agree, but do not agree with the other symptoms, the first two may be relied upon as giving the true index of the patient's condition; but when the pulse and temperature agree, and the temperature does not, the first two must be depended upon." "When the pulse and general symptoms agree, a slight fall of temperature is of no value as a sign of improvement, except it be continuous and gradual for several days; and when the other symptoms are the same, a continuous rise of the temperature for several days, occurring at a period of the disease, when a contrary course should be expected, indicates danger and probably a fatal result." (Compton.)

From these facts may be deduced the rule that rises and falls

of temperature occurring at different periods of the disease, are of widely different significance.

In Aitken's work you will find much of interest concerning the relation of the amount of excreta to the elevations of temperature, to which I refer you.

In all cases of convalescence from any acute febrile disease, any departure from the regular course of defervescence, as shown by the temperature, denotes that the disease has not yet abated, but that relapse is to be apprehended, and when there is no such departure, the contrary is to be depended upon. The following case will exemplify my meaning better: In a mild case of typhoid fever, after convalescence had fairly set in and a normal temperature arrived at, I found, on a visit, the temperature marking 102°. I cautioned my patient, and desired to be informed immediately if there was any change. Sure enough, there was, in less than twelve hours, an attack of diarrhœa, with frequent bloody mucus passages. I was notified, and by timely administering of an appropriate remedy checked the trouble. On my next visit, on making strict inquiry, I found that before my previous visit my patient had been guilty of some indiscretions of diet. Scattered through works and journals you will find many more striking examples than this. To them I refer you.

Where the temperature remains the same in the evening as it was in the morning, it can be looked upon as favorable, but when it remains stationary from evening till morning, it is of unfavorable import.

But when it begins to decrease from the evening to the morning, it is a token of improvement; while if it increases (at a period in the disease when we would expect a decrease) it is not favorable.

Convalescence commences at that period in a disease when morbid process ends, and that ending can only be determined upon by a series of thermometrical observations, and what point in a disease is arrived at the thermometer will show it by a normal temperature. In acute diseases we have several

modes of invasion, and two modes of recovery. I will quote Wünderlich upon this point, as given by Reeve. That writer gives the following divisions of the course of a febrile disease—viz.:

A. The period of development or invasion.

B. The period of recovery.

C. The appearance of complications.

D. The fatal termination.

These divisions he sub-divides as follows:

A. The period of development: 1. The initial or pyrogenetic stage. 2. The heighth of the disease, or fastigium. 3. The period of undeterminateness, or amphobolic stage.

B. The period of recovery: 1. The stage of change. 2. The fall of the fever; the defervescence. 3. After the fever; convalescence.

D. The fatal termination: 1. The pre-agonic stage. 2. The agony or death-struggle. 3. Death and the post-mortem stage.

The *pyrogenetic* stage may show three varieties; short, medium, and gradual:

Short, when it rises to a considerable heighth in a day or so; seen in diseases which have a short course, as variola, scarlatina, malarial fevers, pneumonia, pyæmia, typhus, ephemeral fever, and erysipelas.

Medium, when it takes from three to five days, before reaching any considerable heighth, as in any typhoid fever, measles, rheumatism and acute bronchitis.

Gradual, when it takes a still longer period, as seen in some of the inflammations, especially those of the serous membranes.

In the succeeding stages it changes much, subject as it is to all the influences which modify the particular case, yet there are typical ranges, and by the changes or variations from those types, we judge the course of the particular case under observation.

Defervescence is effected by two modes: one, rapid—*crisis;* the other gradual—*lysis.*

By *crisis,* where the temperature becomes normal in form

one-half to one and a half days, as seen in variola, rubeola erysypelas, typhus, etc.

By *lysis*, where it is more gradual and occupying several days, and may present remissions.

Convalescence, as before remarked, is shown by a return to the normal temperature in both the morning and evening, and by its remaining stable at that point we have the assurance of a convalescence progressing favorably. During this stage the temperature is influenced by slight causes, as over-exertion, physical or mental, errors in diet, etc.

The pre-agonic stage exhibits many ranges of temperature, depending upon the nature of the disease, and other causes. It is sometimes marked by rapid and excessive variations, ranging from 3° to 6°; sometimes it is a steady, progressive rise; sometimes a series of alternate rises and falls; oftentimes, very high elevations are the precurser of death, but not invariably so, the rapid fluctuations being a more reliable sign.

Let us now consider some of the diseases of every-day occurrence, noting the ranges of temperature found in typical cases, and where there is some departure from the ordinary type.

To us, as practitioners, typhoid fever is of special interest, and I shall briefly state the results of my observations of some cases I saw during the past year, comparing them for better study.

Called to see a patient complaining of general malaise, diarrhœa, alternate flushing and chills, increasing debility, we suspect this disease, other well-known symptoms may be present or not.

On the first day, in the morning, heat normal, viz., 98.5°F.; in the evening it will be 100.5°F. On the morning of the second day, 99.5°F.; evening, 101.5°F., increasing every evening over the temperature of the preceding evening about 2°F., then falling off by morning about ¾°F., to increase again toward evening, till the evening of the fourth day, when it will reach 104°F. By the end of the first week or ten days the heighth of 104° to 106° will be attained, with descents in the evening of from 9° to 2.5°F.

During the second week, in milder cases, there is some improvement, which is marked by a greater morning decrease, compared with that of the previous morning, while the evening changes will be less marked. But if the morning temperature does not show any decrease, but remains above 103°F., the case is to be deemed one of severity, and when it attains 104°F., is to be looked upon as one of great severity.

In typical cases, the stages are in weekly and half weekly periods, changes generally occurring at the end of these periods, even if such changes are only temporary. During the first and second week, the temperature will be nearly the same in mild and severe cases; after that there will be a marked difference, a divergence so great as to render it an easy matter to prognosticate as to severity. In the third week, we have the vacillations between morning and evening degrees of heat from 3° to 6°F., in mild cases. The evening exacerbations decrease in intensity, and the morning temperature is from 3° to 4°F., lower than that of the preceding evening. The fever ceases in these cases in the course of a week, defervescence occurs, a normal standard is reached, and convalescence sets in during the 3d, 4th, or 5th week. But in severe cases, the temperature in the morning remains at the same high rates, 104° and upwards, with no remissions, but when progressing favorably, these occur in the 4th week, and the temperature becomes lower than in the 3d week. If the temperature still remains higher, the remissions are not apt to happen till the middle of the 6th week. In all cases the occurrence of marked irregularities render the prognosis doubtful. In these severe cases the afternoon temperature is still high, and decreases very gradually, the before-mentioned remissions not occurring till the fifth or sixth week, a period most apt to be marked by complications.

Oftentimes we may observe a great decrease of the temperature, amounting to several degrees, falling below the normal. They are to be looked upon with suspicion, and are due to sudden and great hæmorrhage of the bowels, shown afterwards by

profuse discharges of blood from the bowels, sometimes to intestinal perforation and its consequences.

Wünderlich regards typhoid fever to be of two types or forms, one ending in three or four weeks; the other protracted till the fourth, fifth or sixth week. The first shows itself when there is only soft infiltration of the intestinal glands, the other when this is hard and extensive.

In the first type the return to the normal condition is simple and follows, without retrograde metamorphosis; in the other there is a complicated elimination necessary, in order to get rid of the deposit, ulceration taking place and the healing liable to be more or less protracted. In all cases, of whatever type, two certain cases may be noted, one corresponding to the deposit of this infiltration and exudation; the other to its removal and the healing of the affected places.

When the temperature reaches 104°F. in the morning and 105°F. in the evening, the case is to be regarded as a severe one; when the heat amounts to 106° the case is very doubtful, and if convalescence happens, it will be very slow and tedious. Above 106° the results of the case cannot be very favorable in the great majority of such where that altitude is attained.

A perfect convalescence cannot be assured of until the morning and evening temperature are normal for several successive days. In ephemeral or irritative fever, we find the rise is sudden, an increase from five to six degrees from the normal range, continuing at this elevation for perhaps a day or so, then a sudden fall, generally coïnciding with some cutical discharge, as from bowels, kidneys or skin, the attack thus ending by crisis. But oftentimes the attack does not pass away in this manner, but by a gradual return to the normal range, in these cases disappearing by lysis.

In malarial fevers of the intermittent type, the attack is ushered in by a marked and rapid elevation of temperature, which commences while the patient is still in the chill, increasing till the sweating stage, when it is followed by a rapid declension toward the normal range, where it remains till the

succeeding paroxysm when a like course is followed. The elevations reached range from 104° to 106°, the mean range perhaps 105.4°.

In the remittent we have been unable to find any data, nor have had much if any opportunity to observe. In a case of malarial fever of the intermittent type, seen on the seventh or eighth day of the disease, I found the temperature to be as follows:

	7 A. M.	10 A. M.	12 M.	6 P. M.	10 P. M.
8th day,			104.	103.	100.
9th day,	95.	102.	102.	102.	100.
10th day,	99.	99.5.	99.5.	99.	99.5.
11th day,	99.	98.5.	98.		
12th day,	88.	98.5.		98.5.	98.5.

Quinine given in regular doses from time of first seeing the patient.

There will be the daily accession, corresponding to the return of the fever, and the more the case resembles continued fever, the less will the temperature approach the normal range during the remission. By a careful study of these cases, when prevailing, and a comparison with them with typhoid, we will be enabled to distinguish the two, when of a mixed form, *i. e.*, when partaking of the typho-malarial type.

In measles, during the incubative stage, or invasion, the rise is rapid and continuous for several days, till 103.5° to 104.5F. is reached; when the eruption makes its appearance, the degree of heat begins to decrease till it becomes normal. If there should be any complication, as pneumonia, it will not so act, but will remain elevated. If there should be no such complication, and the temperature remains elevated after the rash appears, the case is to be looked upon as a severe one.

In scarlatina, during the invasion, the temperature continues to rise till the 3d or 4th day, when it attains 104° or 105°F., in some cases even higher; after the rash appears till the 8th or 9th day, it ranges from 102.5° to 103.5°F., when a still further decline is witnessed, continuing till normal is reached.

Sidney Ringer states that these declines of temperature generally occur on the 5th, 10th or 15th day.

In those cases where we have sore throat, without the characteristic eruption, we might be misled into the error of mistaking the disease for tonsillitis; but in the latter, the temperature does not rise above 100.5°F., which degree is generally reached by the middle of the fourth day, the pulse being below 100, and the normal state is reached about the sixth or seventh day. In scarlatina and anginosa, the temperature is more elevated, and the maximum is reached on the third day, while the normal is not reached till the tenth or eleventh day.

In erysipelas the period for the attainment of the highest degree is about the fourth or sixth day, and the period for the defervescence varies accordingly. This is rapid, complete defervescence, occurring in twenty-four or thirty-six hours. But, if the inflammation continues, *i. e.*, relapses occur, the temperature increases with these, and it is not till the disease entirely disappears that complete defervescence happens.

In a case of idiopathic erysipelas of the face and head, I found the temperature, on the evening of the second day of the eruption, to be

		101.5°F.,	with a pulse of		120.
3d day,	temperature,	101.3°F.,	do	do	100.
4th day,	do	101°F.,	do	do	108.
5th day,	do	99°F.,	do	do	80.
6th day	do	98.5°F.,	do	do	83.

No relapse.

Compton says that in this disease there are very sudden changes of temperature, oftentimes alternations of from 4° to 8°F. in twenty-four hours.

In *varioloid* the temperature rises suddenly to a high degree, from 105.5°F. to 106 5°F., where it remains for a few days; then, as the eruption appears, there is a rapid and complete defervescence, and the normal range is reached. The development of the eruption has no influence in causing a reäccession

of fever, and if there should be any such increase we may safely conclude that there is some complication.

In *variola*, however, while the first course is similar, with a corresponding decrease about the fourth day, yet, as the suppurative stage proceeds, there is a rise in the temperature, continuing till it reaches 102.5°F., where it remains, with slight variations, till the close of the disease, sometimes rising somewhat, when desiccation takes place.

In pneumonia, during the disease from the time of the occurrence of the chill, the temperature has been noted for the third day of the disease.

During the third and fourth days of the disease, the temperature is uniformly high, the difference between the extremes being only a degree, or less. The fourth day is the most febrile; the fifth less so. During the sixth day there is a decided decrease, continuing till the seventh or eighth day, when normal is reached; the fever thus ending by crisis. During the first three days the pulse ranges from 100 to 120, then falls to 90 or 70. There is thus shown to be a close connection between temperature and pulse. But between temperature and respiration is not the same close connection, the number of respirations per minute remaining higher than in health, even after the defervescence had occurred.

Such is the natural history of a case of pneumonia, taken from Aitken.

The signs, as elicited by percussion and auscultation, do not show the decline of the disease thus early. In fact, by studying the course of temperature, pulse and respiration, together with an estimate of the excreta, we get the history of the febrile element of the disease, and by the physical signs the local element of the disease; and, while the former element may have disappeared, the latter, the results of inflammation and its products, still continues.

Wünderlich lays down, as a rule by which to judge of a case, as to the intensity of the attack, the following:

"When the mean of the temperature does not reach 104°F.,

of the pulse 120, of the respiration 40, the case is a mild one; but when the temperature records 104°F., the pulse more than 120, and the respiration more than 40, during the intensity of the disease, the case is a severe one."

The decrease of temperature generally precedes the falling of the pulse, and the fourth day is the period of maximum elevation in uncomplicated cases, the decline beginning on the fifth day, becomes rapid toward the sixth day, and is attended with well-marked critical phenomena on the seventh day, and the normal is reached on the eighth or ninth day.

In typical cases, the range is from morning till evening, and the decline from evening till morning.

When fresh lung tissue is invaded, an increase or reäccession of fever may be expected, but in uncomplicated cases the defervescence is rapid, occurring in from twelve to thirty-six hours.

In a case of pneumonia of the base of the left lung, in a patient, Miss B., *æt.* 18, seen on the third day, the following observations were taken, seeing the patient on alternate days:

3d day,	temperature,	103°;	respiration,	48;	pulse,	120.
5th day,	"	103.5°;	"	48;	"	108.
7th day,	"	102.5°;	"	46;	"	100.
9th day,	"	99°;	"	42;	"	84.
11th day,	"	98.5°;	"	35;	"	80.

In pneumonia, as occurring in the aged, there are some points of difference. These you will find pointed out in Aitken's work, to which I refer you, more especially as I have had no opportunities of observation.

In acute phthisis we find an elevated temperature, continuing throughout the course of the disease, ranging from 102° to 104°, with slight daily remissions, not, however, reaching normal.

In chronic progressive phthisis the temperature is also elevated. In several patients suffering from this disease I found, by occasional observations, the temperature to range from 102°F. to 102.5°F., rarely reaching 103°.

In rheumatic fever I find the authorities to disagree.

Compton says in this disease, "we have a long and slightly elevated temperature, generally ranging from 99° to 102°, and very rarely reaching 103°F." In a case observed by myself, the course corresponded to this.

But Aitken says that we have great and sudden vacillations of temperature, occurring during the day, and "that the increase above 98.4°F., will give us a tolerably accurate measure of the amount of poison in the system, and the patient's susceptibility to its influence."

This may explain the difference: where the joints are alone affected the temperature may range from 100° to 102.5°F.; where some of the internal organs are involved, the other course may be the one present.

The heat of the affected joints is constantly increased, ranging from 101°F. to 105°F., or more.

In conclusion, it may not be uninteresting to note the condition of the temperature as occurring in the lying-in state, quoting from "American Journal Medical Science," April, 1871, article on puerperal diseases.

In the first twelve hours after the delivery there is a slight ascent, followed by a corresponding fall during the second twelve hours; after which it again makes a slight ascent; but that the temperature in this state, when occurring in healthy women, does not vary more than in healthy persons generally, but that average temperature is somewhat higher than in healthy persons generally, ranging from 98.9°F. to 100.7°F.

In the same article you will find in the work under review, (Dr. Winckel's Pathology and Therapeutics of Children) is asserted that there is no such thing as milk fever; that in the majority of females in the lying-in state, we do not have any rise of temperature corresponding to the secretion of milk. This is a subject still in dispute. Winckel asserts "that it is only where there are sore nipples, or the beginning of inflammation of the breasts, or where there are ulcerations or other affections of the genitals, that actual fever occurs. Without chill or chills, there occurs then a rapid and considerable ascent,

of the temperature, even above 104°F., which has no connection with the secretion of milk, but depends upon local inflammation of the breasts and genitals."

Wünderlich's work will be published by the Sydenham's Society during the present year, translated by Dr. Woodman, with notes, when this important work will be placed within reach of the Profession in this country.

Various forms of the thermometer are recommended, the best, perhaps, being that which is divided into tenths degree. The one I have used is only subdivided into half degrees. These instruments may either have a spherical or cylindrical bulb. Dr. E. Seguin, of New York, who has been an ardent investigator in this field, has devised "an instrument for use on the surface of the body, the bulb being hemispherical in shape, the flat plane being admirably adapted for application to the surface." The usual place of application is the axilla, it being previously dried of all moisture from perspiration. The mouth is not as reliable as a place of observation, owing to cold air being inhaled, interfering with true observations. The rectum and vagina have been recommended by some as the best localities for placing the instrument for observations. Serious objections, apparent to all, arise against so doing.

The study of this important subject has been gradually extending, and I have only desired to give you a sketch of it, hoping thereby to draw the attention of those among you to whom the subject is not familiar, and draw out the experience of those who have studied the subject.—*West Va. Trans.*

ART. III.—HEALING OF ULCERS BY TRANSPLANTATION. By Prof. FRANK H. HAMILTON, M. D., New York.

In a report of my clinic at the Dispensary of Geneva Medical College for January, 1847, the case of a lad fifteen years old is given, whose leg had been in a great measure stripped of integument eight years before, and the wound had never closed.

The report says: "Dr. Hamilton proposed to the boy a plastic operation, with the view of planting upon the *centre* of the ulcer a piece of new and perfectly healthy skin. (This proposition was first made to him two years before.) He proposes to take this from the calf of the other leg, *not intending to cover over the whole sore, but perhaps, two or three square inches, which he believes will be enough to secure the closure of the whole wound in a short time.*"*

This lad did not consent to have me operate, and in 1864 he was still living, and the sore remained open.

My first operation of this kind was made January 21, 1854, upon Horace Driscoll, in the Buffalo Hospital of the Sisters of Charity. Driscoll had lost a large portion of the integument of his leg by the fall of a heavy stone upon it; and after the lapse of fifteen months it was apparent that the ordinary processes of nature were insufficient for its repair. A full account of this operation was published in the "New York Journal of Medicine" for the same year.† It may be found, also, copied in the "Buffalo Medical Journal" for December, 1854, vol. x., pp. 433, 438.

The integument was taken from the calf of the opposite leg, but was wholly inadequate to cover the entire sore. In ninety days cicatrization was complete, and it has remained so until the present day, or until a recent date, when I last heard from him. In the result it was observed that the new piece of skin had grown from its circumference in every direction, so that it was in the end nearly twice its original size.

In the paper referred to occur the following remarks: "By this means I hope, gentlemen, not only to supply an amount of skin equal to the size of the piece transferred, but to furnish also a nucleus from which additional skin shall be formed. I

* "Buffalo Medical and Surgical Journal," February, 1847, vol. ii., p. 508.

† Old ulcers treated by Anaplasty. Read before the Buffalo Medical Association, June 27, 1854, by Frank H. Hamilton, Professor of Surgery in the University of Buffalo, and Surgeon to the Buffalo Hospital of the Sisters of Charity.

hope to establish a new centre of life—an oasis—from whose outer verge a true and healthy vegetation shall advance in every direction over the exhausted soil."

I further stated that the graft would not only grow, but that it would also expand centrifugally by the contraction of the surrounding granulations, as by the contraction of the granulations the skin about the ulcer is known to be drawn centripetally; and in confirmation of this, also I referred to the case above described. The following summary closed my remarks:

1. Ulcers, accompanied with extensive loss of integument, do generally refuse to heal, whatever may be the health of the body or of the limb.

2. Anaplasty will succeed sometimes in accomplishing a permanent cure, and especially when the health of the body and of the limb is perfect, and when, by inference, the refusal to heal is alone attributable to the extent of the tegumentary loss.

3. The graft must be brought from a part quite remote; generally from the opposite limb, or from another person (because in no other way could the graft, with its pedicle attached, according to my method, be carried to the centre of the ulcer).

4. *If smaller than the chasm which it is intended to fill, the graft will grow, or project from itself new skin to supply the deficiency.*

5. It is not improbable that the graft will *expand*, during the process of cicatrization at its margins, but especially for a time after the cicatrization is consummated. (This proposition I have since fully verified).

6. In consequence of one or of both of these two latter circumstances, *it will not be necessary to make the graft as large as the deficiency it is intended to supply.*

In reply to Dr. Watson, of New York, who had said that anaplasty for the cure of old ulcers was not new, and that he had done the same himself, I answered in the number of the "New York Journal of Medicine" for January, 1855, that he had only repeated a very old operation of sliding in integument, and one which I had often made myself, long before my

new suggestion was announced. "He had never thought of making the flap smaller than the space which it is intended to supply, and then trusting to growth and expansion to complete the cure. . . He has not, therefore, adopted my procedure, nor obtained my results."

Since the date of my first operation, I have repeated the operation many times, and with almost uniform success. Last winter, at Bellevue Hospital, Dr. Gouley carried the operation a step further than myself by applying it for the cure of an extensive burn of the *thigh*. Before operating, Dr. Gouley requested me to see the case with him, and to give an opinion as to whether my operation would succeed. I assured him that if he could engraft only a small piece upon the centre of the immense ulcer, success would be almost certain; but that, inasmuch as he must take the skin from the opposite thigh, I had some fears that he would lose the graft. It would be more difficult than in the case of the leg, to so cross the limbs that the pediculated graft could be attached to the centre of the sore. Dr. Gouley made the operation; and, although only a very small piece was saved, the success of the operation has been nearly or quite complete.

In December, 1869, M. Reverdin, *interne* at La Charité, read before the Surgical Society of Paris, a paper on Epidermic Grafting, which was published in the bulletin of the Society for that year, and also in the "Gazette des Hôpitaux" for January 11 and 22, 1870.

The method proposed and practiced by M. Reverdin consists in detaching, with the scissors or with the knife, a minute piece of skin, the smaller the better, it is affirmed, and then burying it in the centre of the granulated ulcer; by which simple process a new centre of growth is established, and the sore healed. The attention of American surgeons was first drawn to this interesting discovery by the experiments of Mr. Pollock, at St. George's Hospital, in May, 1870; and in the following August at the Charity Hospital, Blackwell's Island, where we have constantly under our care many hundreds of old ulcers. The re-

sults of my first experiments were given to the public by my house-surgeon, Dr. Williams.* Of fifty transplantations made either by myself or Dr. Williams, only six were successful—the great disproportion of failures being due to the almost indiscriminate selection of cases, and to the great variety of methods which we adopted, our purpose being to determine the extent of its applicability, and to ascertain in what manner success would be most certainly attained. Since the date of these operations I have seldom met with a failure, except in those cases in which a failure has been predicted from the unfavorable aspect of the sore, or the instructions in relation to management have not been fully carried out. The following remarks comprise the results of the observations hitherto made, and in which nearly all observers concur:

The more healthy the condition of the granulations the better is the chance of success; indeed, with perfectly healthy granulations, success is almost certain. It is not material from what point of the body the graft is taken, although it will be found most convenient to take it from some portion which is thin and flexible. With a pair of fine, mouse-toothed forceps the integument is lifted, and with the knife or scissors cut out. It is generally considered essential that the areolar tissue and fat should not be included in the graft; whether this is a matter of consequence or not I am unable to say; but it is certain that it makes no difference how small the place may be; it is not necessary to cut so deep as to draw blood. Having cut out a piece as small as can be conveniently removed, we may proceed to divide it into several smaller pieces, nor does the amount of contusion which it suffers in this process seem to affect its vitality. After a trial of several methods of inserting the fragments, I have arrived at the conclusion that, if the granulations are fresh and vigorous, there is no better way than simply to lay them upon the surface without attempting to embed them by incisions, nor does it seem to be a matter of any

* Healing Ulcers by Transplantations. By H. R. Williams, M. D., late House-Surgeon, Charity Hospital. "Medical Gazette," December 3, 1870.

consequence how they lie, whether with the raw surface turned in the one direction or the other. The grafts, when several are inserted simultaneously, should be placed at intervals of about one inch apart, as it is observed that the limit of growth of each separate piece does not in general exceed a diameter of one inch or thereabout. In order to retain them in place, I have generally used common adhesive plaster, reïnforced by a few turns of the roller. If the operation of grafting is made upon either of the extremities, it will be necessary to impose upon the patient absolute rest, in the recumbent posture; but more especially is this required in the case of the lower extremities.

The dressings should be permitted to remain undisturbed two or three days, when they may be removed, and the sore made clean with tepid water and soap, and subsequently bathed with a solution of carbolic acid and water, of the strength of three or four grains to the ounce. The subsequent treatment will be the same as for an ulcer under ordinary circumstances.

When the dressings are first removed, what appear to be the grafts may be seen lying where they were originally placed, or floating loosely about. Sometimes they seem to have disappeared altogether. It is thought that these points, which seem to be the grafts, is only the cuticle which has been sloughed off from the derma; but I am not able to say whether this is so or not. When they remain attached, the underlying process of development of a new skin cannot be observed so accurately; but when they have floated away from their original position, we shall notice, first, a slight depression where they were deposited, which depression is in some cases substituted for a corresponding elevation a few days later—generally, I think, the point remains depressed; second, on or about the seventh or tenth day after the grafting, the centre of the depression or elevation, assumes a bluish-white, opaque appearance, precisely like that which I heretofore described as appearing upon exposed bone when skin is beginning to form. By the aid of a glass the increased vascularity, and some degree of opacity,

may be detected at an earlier period. This is the commencement of the process of skin formation.

At the same moment, also in which we discover that the transplantation has been successful, we shall see in case a graft is placed within half or three-quarters of an inch of the margin of the ulcer, that skin is projecting from the margin toward the graft in the form of a minute promontory, so that, if I may be permitted to use a figure of speech, a bridge is soon formed in this direction between the island and the mainland; in a few days more the graft is lost in the surrounding integument, and becomes in its turn the outer margin of the greatly-diminished sore. Finally all the grafts coalesce, each contributing an inch or less to the completion of the cicatrization.

Mr. Steele, who has contributed an excellent paper to the elucidation of this subject, is inclined to think that consecutive transplantations are better than numerous simultaneous insertions, and that each series gives fresh life and vigor to the whole surface.*

How far the new skin differs from the ordinary cicatricial tissue, I am not prepared to say, but it appears thicker and more elastic, and it is certainly equally capable of resisting all ordinary destructive influences. Like cicatricial tissue, it is devoid of hair-follicles, sebaceous and sweat glands.

Later experiments have shown that success will occasionally attend the employment of much larger pieces than were employed by Reverdin. I have succeeded with grafts of the size of a five and ten-cent piece; but portions are pretty certain to slough, and I doubt whether this method possesses any advantages which would justify its substitution for the much less painful and simpler method just described.

Mr. Fiddes, of England, claims to have succeeded equally by scattering upon the open ulcer the epidermis scraped from the surface of the skin with a dull knife. I have not made the ex-

* Clinical Lecture by Charles Steele, Esq., Surgeon to the British Royal Infirmary. British Medical Journal, December 10, 1870

periment; but Mr. Woodman says he has tried it, and has had no result.

Finally, to complete the narrative of experiments which have been instituted up to the present time, a graft has been taken from the leg immediately after its amputation, and its transplantation has proved successful; while Mr. Pollock has failed to generate skin with colored pigment, by transplantation from the negro.

Various theories have already been suggested in explanation of this wonderful process; the most plausible of which seems to be that the epithelial cell contained in the graft, imparts to the granulations with which it is placed in contact a new and peculiar vital force, by virtue of which they are enabled to construct cells of the same character; in other words, that we have in this experiment an illustration of the doctrine of assimilation. In my original paper on transplantation for healing old ulcers, I stated several objections to this doctrine; but on the whole it appears, in the light of later experiments, less liable to objections than any other yet suggested. Like all the vital processes, however, it is likely to remain for a long time, if not forever, in doubt.

The range of the applicability of M. Reverdin's operation is not limited to the cure of large ulcers. We have already been able to substitute it for the usual forms of anaplasty in the case of contractions from burns and from other causes, by first dividing the tissues freely, and then when granulations are fully developed, inserting the grafts. In this way I have even succeeded in restoring to position an everted lid. It is equally capable of preventing contractions and deformities of limbs, by its timely interposition. At Bellevue we have covered by the same method exposed stumps, which otherwise would have demanded resection. No doubt, also, further experience will show many additional circumstances under which it will prove useful. *New York Medical Journal.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "British Medical Journal," and the "London Lancet," etc. (Original copies). By Prof. JAMES M. HOLLOWAY, M. D.

Extracts of Meat.—The investigations of Dr. R. Muller and others go to show that the extracts of meat are not nutritive. The heat employed in preparing them coagulates the albuminous matter.

Dr. M. asserts that "if given alone—and the same applies to beef-tea—these extracts only tend to retard convalescence."

In our opinion, it will require a longer time to convert the mass of the Profession to Dr. Muller's position than has been necessary to induce the abandonment of many of the time-honored but inert therapeutic agents.

Hæmorrhage from the Nose.—G. R. Gilruth, Edinburgh, reports ten cases of epistaxis, with the remark that plugging of the posterior nares is seldom necessary even in severe cases. The following is the simple treatment he employs: "A piece of lint is rolled up so as to fit the nostril, soaked in muriate of iron (tr. ferri. mur.) and screwed tightly into the nostril. Clots should be first removed. The plug may remain in for four days. The recumbent posture should be strictly enforced."

[In the management of a case of epistaxis last spring, the patient being a boy aged eight years, who had been bleeding profusely at intervals from midnight until 5 o'clock A. M., the writer found that plugging of the anterior nares had completely failed. Upon arrival, at 5 o'clock P. M., the boy was blanched, almost pulseless, and the blood spurted from the mouth and nostrils, with coughing expiration. By means of a catheter, a bit of sponge and strand of surgeons' silk, the posterior nares was speedily plugged, and the bleeding ceased abruptly. The plug

was allowed to remain four days, when, upon attempting to remove it, the silk thread broke. The end protruding from the anterior nares was carried backwards and downwards into the mouth; but upon traction it also proved defective, and came away, leaving the sponge *in situ*. The irritability and timidity of the boy induced a postponement of the effort to remove the sponge for a few days. When the attempt was renewed, the sponge proved to be very friable—rotten perhaps—so that sounds, steel and flexible, Gooch canula, and many other instruments were employed to push it back into the pharynx, all of which pierced the sponge without budging it.

Finally a mop, upon the end of sound, succeeded in dislodging it, but not until the entire nasal cavity was highly inflamed and seriously damaged.

The writer has no other case of surgery—minor or capital—to record that was attended with one-half the amount of mental anxiety and chagrin, nor one by which he so fully and completely destroyed his reputation for surgical skill.]

Ether Inhalation.—At the Clinic, in St. George's Hospital, London, Mr. Pollock and Mr. Henry Lee have recently been employing ether, instead of chloroform, as an anæsthetic. The reporter states that the anæsthesia was produced with as much ease and rapidity, apparently, as is usual with chloroform. "In two cases (adults), in which the time was noted, insensibility was produced in five and four minutes and a half respectively. The inhaler employed consisted of a cone of felt, into which a small sponge was introduced, so arranged as to prevent dripping of the ether into the patient's face."

The only outward difference between the administration of ether and that of chloroform appeared, in these cases, to be the more frequent replenishment of the inhaler.

[The abstract of this report is presented in striking contrast with the experience of the analyst, and that of other surgeons with whom he has discussed the relative effects of ether and chloroform.]

One of the chief objections to ether as an anæsthetic is the

time consumed in producing insensibility. The difference between the inhalers employed by the London surgeons and ourselves is immaterial. Instead of the felt cone and sponge, we have employed the newspaper cone and sponge; or, what we deem better, cotton wool. This cone is held down tightly over the face of the patient, so as to exclude, as far as possible, the admission of atmospheric air. Under this method we have rarely been able to produce insensibility within fifteen minutes, generally a much longer period being required. Further, the effects of the chloroform and ether differ widely from each other. When the former is used properly, the stage of excitement is usually brief, and is speedily followed by complete insensibility. If the administration is somewhat prolonged, the patient is left, after the operation, with a feebler pulse and a blanched skin. *Per contra*, when the latter is employed, the stage of intoxication is prolonged, complete insensibility is speedily recovered from upon withdrawal of the remedy, and the patient usually is removed from the operating table to the bed with a full pulse and a flushed face.

Wound of the Intestine during Ovariotomy.—Mr. Christopher Heath, on November 10, 1871, reported to the Clinical Society, of London, a case of ovariotomy, during which he had divided an empty coil of small intestines for two-thirds of its circumference, while making the usual abdominal incisions with scissors. The intestine was closely adherent to the abdominal parietes. Instead of sewing up the intestine in the usual way, he attached the bowel to the skin with silk sutures. An artificial anus was made, through which flatus and fœces passed on the second day, and solid motions per anum. The silk sutures were removed on the eleventh day. The woman was able to walk about in about one month, and the artificial opening was kept easily closed by a belt and air pad, so that all the dejections were made to pass per *via naturale*.

Disinfecting Power of Carbolic Acid.—The following, in reference to the above medicine, is contained in a paper by H.

J. Von Aukum: Atmospheric air, to which are added the vapors of carbolic acid, is *unable* to hinder the development of lower organisms in water with hay, in milk, and in urine. He put those substances under a glass bell, with an opening at the upper side, and surrounded by little cups filled with carbolic acid. All were placed in a ventilating closet, and the arrangement was such that the air that passed the above-named substances was mixed, if not saturated, with the vapors of carbolic acid. After the lapse of a little time, the development of lower organisms took place, just as if the fluids had been been exposed to free air. He concludes from his experiments that *no* disinfecting action can be expected from the vapors of carbolic acid when they are mixed with atmospheric air in such quantity that the respiration can take place in it without damage.

Suppurating Buboes with Different Plans of Treatment.—Mr. A. S. Bostock reports a case with a suppurating bubo in each groin. One of the buboes was freely incised; the other was opened with a trocar and canula, its contents evacuated, a solution of zinc sulph., grs. iv. to one ounce injected, and pressure made with a pad and bandage. On the eighth day the last-named bubo was quite healed; while the first named did not heal until the fiftieth day.

Treatment of Epistaxis.—Attention is directed to the use of the colpeurynter for this purpose, as described in the January number (1872) of this Journal, page 121.—Ed.

Skin Grafting.—The inner membrane of an ordinary hen's egg is now successfully used for this purpose.—Ed.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

CLINICAL LECTURES AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

SEVENTEENTH LECTURE—A CASE OF PARAPLEGIA.

Physiological Analysis of a Case of Paraplegia—Triple Obligation of Diagnosis—Symptomatic, Pathogenetic, and Nosological Diagnosis—Pseudo-Paraplegias.

Analysis of the State of Motility—Voluntary, Reflex, Spontaneous, and Associated Movements—Movements Provoked by Electricity—Divers Processes of Electrical Exploration—New Fact Regarding the Spino-Muscular Current—Analysis of Cutaneous Sensibility---Precautions to be taken in the Exploration of Tactile Sensibility.

Pathogenetic Diagnosis---Seat and Nature of the Lesion.

Nosological Diagnosis---The Sterility of Physiological Diagnosis for Prognosis and Treatment---Importance of Medical Diagnosis---Treatment of Syphilitic Paraplegia.

Gentlemen,—In taking to-day as the subject of our conference a paraplegic patient, who is in the way of improvement, and whose cure is certain, my aim is to teach you, and demonstrate by application, the method and the processes of clinical judgment in all analogous cases. I wish in the meantime to indicate to you the semiological nature of certain interesting phenomena, which have been very clearly exhibited in our patient.

This is a man thirty-five years of age (Ward St. Charles, No. 19), who is paralyzed in his inferior muscles; this paralysis dates back two months, it developed itself abruptly within three days. The first step in our diagnosis does not here present any

difficulty; the absence of motor power varies as to its degree in the two sides, but it is perfectly symmetrical as to its seat; standing erect is absolutely impossible, the muscular force is nil, the right limb is completely inert, the other still executes certain movements, which I shall presently point out. In addition, the muscles are not atrophied; they present neither contractures nor convulsions; the motility of the trunk and superior members is perfect; finally, it is in full health that the individual has been stricken down; there is no possible doubt that we have a symmetrical akinésie of the inferior members, resulting from a perturbation of voluntary motorial inervation. The first conclusion may be affirmed without discussion; you may well believe it would not be the same thing if the paraplegia was incomplete, especially if it had still permitted the patient to stand up and walk; it would then be necessary to take into serious consideration certain disorders which can simulate in a strange fashion, incomplete paralysis of the inferior members. These disorders, which I have grouped under the generic qualification of *pseudo-paraplegias*,* result from five different conditions. 1st. General asthenia. 2d. Partial paralysis of one or more muscles. Then, even when this paralysis only occupies one of the inferior members, it can impede walking to the degree of simulating paraplegia; it is by an attentive analysis of the movements, either during progression or during repose, that the true cause of the disorder can be recognized. 3d. The exaggeration of spinal excitability. In this case walking is difficult, or even impossible, because the contact of the sole of the foot upon the ground brings about more or less violent reflex movements in either the flexors or extensors. 4th. Plantar anæsthesia. In this case progression is hesitating, and often tottering, because plantar cutaneous sensibility, a condition important to equilibrium in standing erect, is abolished. This false paraplegia is one of those which most resemble true paraplegia; for avoiding error, it is not sufficient, as you may well conceive, to establish the fact that the sole of the foot has

* Jaccoud, loc. cit.

lost tactile sensibility; for a real paraplegia can be accompanied by a plantar anæsthesia; it is necessary to be assured that this anæsthesia alone exists, and is the sole cause of the disorders observed. For obtaining this idea, it is necessary to examine the motility of the inferior members when lying down, or sitting down, after having studied them well while standing erect; if simply affected with a plantar anæsthesia, one will find in the patient sitting up or lying down, all the movements preserved, and normal as to their force. If this anæsthesia coëxists with an incomplete paraplegia, the movements, considered alone, can be well preserved, but the force would be diminished; it would not be in accordance with the age, with the constitution, and the muscular development of the individual, and it would contrast in a striking manner with the intact muscular force of the inferior members. 5th. Locomotor ataxia. This is the most important and the most frequent of the pseudo-paraplegias; among other distinctive characteristics, I will recall the following: Whilst the ataxic, subjected to a mechanical impulsion against which he cannot well resist, projects his limbs wildly forward in the most grotesque directions, expending without useful effect a great portion of his forces, the paraplegic draws gently and painfully his feet from the earth, where the paralysis is still so incomplete that he can yet lift them up, the progression is accomplished in an antero-posterior vertical plane, parallel to the median axis of the body, and the movements of walking are not disordinated. When the paraplegic describes an arc of a circle with his inferior members, resulting from a predominant paralysis of the adductors, the circular projection has neither the abruptness nor the violence which one sees in the ataxic; it takes place with a measured gentleness, almost a cadence; and when the foot comes in contact with the ground, it is generally the motatarsus which touches it, after which the toe gently comes down. One does not observe that striking percussion of the toe long since pointed out, and with reason, as one of the characteristic traits of *tabes dorsalis*. Finally, however incomplete may be a paraplegia, the

partial movements, or the movements in their entirety of the inferior members have lost their force, this is not the case in pure ataxia.*

I have recalled to you the diverse obligations of diagnosis in doubtful cases, but in the patient before us, no such necessity exists with the observer, there is no possible error. But, gentlemen, to say that an individual is paraplegic, this is not making a diagnosis; this declaration teaches us nothing of prognosis or treatment; confining ourself to this proposition, is to stop *en route* before obtaining a complete view of the subject; this is to overlook at once the interests of science and those of the patient. This fault, however, I regret to say, is still often committed, and I conjure you to avoid it. The paraplegia is a symptom, and your endeavor should be not only to establish it, but after that, to seek the lesion and the disease on which it depends. When an individual is affected with vomiting, do you carry your diagnosis to the simple annunciation of the fact? Are you content to say, there is a patient who vomits? No, certainly; but taking this well-established symptom as a point of departure, you determine the organic conditions and cause of the phenomena very well. The situation is the same for paraplegia. There is an individual who is paraplegic; but the paraplegic symptom is dependent on the spinal marrow. We ought then to search out the state of the marrow which has given origin to the paralysis; that is to say, after having made the diagnosis of the symptom, or the symptomatic diagnosis, we ought to make the pathogenetic diagnosis; this last ought to be completed by the diagnosis of the disease, or the nosological diagnosis. After that only is the clinical task achieved, and the physician able to take a rational practical determination. This triple obligation is constant, whatever may be the symptoms studied.

Now, for determining the state of the marrow which, in a given case, has brought about paraplegia, it does not suffice to

* See for more details the characteristics and differential diagnosis of the ataxias of movement, in the work already cited, p. 639, and following.

know of the existence of a phenomenon; it is necessary, in addition, to be completely informed regarding the totality of the characteristics and a minute analysis, bearing succesively upon the motility, sensibility, and the nutrition of the paralyzed parts, can alone furnish the elements of this judgment. Applying then this general precept to our patient, we proceed to study the peculiar characteristics of his paraplegia.

The voluntary movements are totally abolished in the right lower limb, whatever the effort of the individual, he cannot move a single muscular fibre of this side; his limb is an inert mass, which has become foreign to him, the motor excitation leaving the brain, no longer reaches there. On the left, the loss of movement is not so absolute. The patient cannot elevate his member above the plane of the bed, but in sliding it along the plane which sustains it, he can carry it slightly backwards and forwards. He can also bring it a little upward, this last movement seems very extensive, but be on your guard, here is a cause of error; the greatest part of the displacement is obtained by an artifice which it is proper to know. It is rather with the muscles of the thigh that the patient commences the ascending movement, the slight flexion which he produces then in the articulation of the knee proves this clearly; but he achieves this in suddenly deviating the trunk to the right; the left lower limb is passively drawn by this projection of the trunk outward, and its ascension results, for the most part, from the displacement of the body. For putting one's self beyond the reach of this illusion, it is necessary to prevent the patient's taking a point of support on the borders of the bed with his hands, and to maintain his trunk and pelvis perfectly immovable. If, under these conditions, a movement takes place in the inferior member, you are certain that it is produced by the muscles of either the thigh or the leg, and you can thus appreciate the true degree of activity which survives in these muscles. When one takes these precautions with our man, it is seen that the movement of ascension persists, but that it is much more limited than it seems at first.

An explanation of the reflex movements does not give the same results for the two sides. On the right, they are difficult to provoke, slow to appear, and of but very slight extent. On the left, they are manifestly exaggerated, for a slight excitation of the skin is sufficient to induce them; and furthermore, a limited excitation of the sole of the left foot, or the inner aspect of the thigh of the same side, brings about contractions, not only in the left limb, but also in the muscles of the right leg or thigh. You have here a demonstration of one of the laws of Pflüger touching reflex movements—this law, which I have called the law of symmetry, can be thus formulated: When artificial excitation has produced unilateral reflex movements, it turns out that it is not exhausted, and that it affects secondarily the other half of the marrow. In this case the motor fibres thus consecutively excited, always correspond to those which have received the first excitation; so that the muscles which contract on the non-excited side are the same as on the opposite side. In other terms, the line of junction which reünites the motor groups, excited in the two halves of the marrow, is perpendicular to the longitudinal axis of the organ.

The paralyzed limbs of our man do not present any spontaneous movement; that is to say, they are not the seat of any contraction, of any shock occurring without previous artificial excitation, the associated movements so frequent in hemiplegics are equally defective. You know that such are called the involuntary movements which appear in the paralyzed members under the influence of voluntary movements executed by the sound muscles.

The movements provoked by electricity have a normal energy and rapidity, and they have the same characters with the muscular current and with the nervo-muscular. But the electric exploration reveals here one of the most remarkable peculiarities, to which I would call your attention. The fact is new, and I do not think it has been pointed out; for myself, this is the first time I have observed it, and this phenomenon, corroborated by other symptoms of which I will now speak to you, can

contribute to the determination of the seat of the lesion. Observe in what it consists. The muscular current, and the nervo-muscular are not the only processes of electrical exploration of the muscles; there is yet a third, which consists in placing one of the poles upon the muscle, and the other upon the corresponding half of the vertebral column, at the height at which originate the nerves which animate the muscles. Whether the current thus formed really passes by the marrow and the nerves to reach the muscle, as celebrated specialists affirm, I am ignorant, and am not in the position to prove it or the contrary. But what is certain is, that one thus obtains muscular contractions as energetic as with the two other processes. Place a conductor upon the mass of the posterior muscles of the left thigh, for example, the other upon the left side of the vertebral column, at the height of the three last dorsal vertebræ, and you will see the muscles contract, and it is the same in all the other regions, provided that the dorsal rheophore is at the height or above the emergence of the nerves which distribute themselves to the muscle examined. This is that current which I designate for convenience of language, and all reserve made as to those parts by which passes, under the name of spino-muscular current.

This much said, observe the interesting phenomenon which we establish in our patient. When we apply the spino-muscular current on a level with the first lumbar vertebra to the right and left successively, the muscles of the thigh and leg contract equally well in the right and left limbs; the rapidity and energy of the contraction are the same for the two sides, just as with the nervo-muscular and muscular current. Then, if without any change in the intensity of the current, and the position of the peripheric rheophore, we put the dorsal rheophore up to the height of the seventh dorsal vertebra, then we see that the results produced are not the same for the two sides. In the left lower limb the contractions are as rapid and as strong as usual, but on the right things have changed—the contraction has taken place, but it has been delayed, and is

much less energetic than in the homologous muscles of the left side. Taking this series of explorations, and we arrive at this conclusion: excited directly by the pure muscular current, the muscles contract in the same manner on the right and left sides; the nervo-muscular current also gives similar results to the two sides; the spino-muscular current has identical effects in the two limbs, if it is applied at the height of the first lumbar vertebra; but at the height of the seventh dorsal vertebra the effects are dissimilar. There results perfect contraction of the left muscles, and imperfect of the right side. Consequently, without any pre-judgment as to the track of the current, without forming any hypothesis as to the mode of excitation of the nerves and muscles in this process of exploration, we are in possession of a positive and certain fact, which can be rigorously expressed in these terms: at the height of the first lumbar vertebra, the spino-muscular current, right and left, acts equally well upon corresponding muscles; but at the height of the seventh dorsal vertebra, the current of the left acts better than that of the right; or, if you will, the current passes from the vertebral column (of the marrow) to the muscles more easily by the left than the right. Retain well this fact, we will see soon what will come from its consideration.

You have remarked, doubtless, that to study the state of motility in our paraplegic, I have successively examined five species of movements: voluntary movements, reflex movements, spontaneous movements, associated movements, and movements produced by electricity. The obligations of clinical analysis are the same in every paralysis. I recommend you to never lose sight of them.

The muscles of the trunk, particularly the large muscles of the abdomen, have preserved their motility, but the expulsor muscles of the urine are paralyzed; our patient has a retention of urine which dates even from the beginning of his paraplegia. He knows how to sound himself, and as he has preserved the vesical sensibility, he always empties his bladder in time, and you never observe in him micturition by overflow, which is fre-

quent in paraplegics with retention of urine. The intestinal muscles are much less affected than the vesical; meteorism is not customary, and constipation, although abnormal, is not obstinate.

I come to the study of the cutaneous sensibility; it ought always to be explored in the four following modes: Tactile sensibility, sensibility to pain, sensibility to heat or thermal sensibility, and the electric sensibility. These four orders of research are of absolute necessity, because the perturbations of the different sensitive ways are independent one of the other. To appreciate the state of tactile sensibility, one is generally content to pinch the integuments, and demand whether or not the individual perceives; such a mode of investigation is defective, it exposes to error, because it substitutes a painful impression for a tactile one. The following process, which I have always put in practice, is the only exact one; the eyes of the patient being covered with a bandage, I apply the palp of the finger upon a point of the integument without exercising pressure; if the perception of contact is normal, the individual ought not only to perceive this purely tactile impression, but he ought, in addition, to localize it exactly.

On repeating this exploration of different parts of the limb, one acquires positive notions of the state of this special sensibility; but, since the hand of the explorer has not always the same temperature with the patient, another precaution still ought to be taken; a piece of linen ought to be interposed between the finger and limb, in order not to confound a thermal impression with a tactile one.*

In our patient the tactile sensibility is perfect in the right lower limb, that one which is the most completely paralyzed; there are the same results for the sense of pain, and the sense

* When it is necessary not only to establish the existence or absence of tactile sensibility, but also to measure its delicacy, this process is not sufficient, and it becomes proper to resort to the æsthesiometrical method of Weber. There is to be found in my work on Paraplegias an exposition of this method, and a description of an æsthesiometrical compass simplified, which I have made for practical application (p. 678 et suiv).

of heat. On the left, where the movement is less compromised than the right, the phenomena are different. The sensibility to contact is good, but the thermal sensibility is perverted, and the sensibility to pain fails completely throughout the length of the member; the impressions produced by the constriction of the integuments carried to the point of producing ecchymosis by the pricking of pins thrust into the sub-cutaneous tissues, are perceived as tactile impressions; the patient perceives that he is touched, but nothing otherwise, he has therefore preserved his tactile sensibility, but he can perceive no painful sensation.

The electric sensibility exists on the two sides, but the same current applied over the same points, develops much more lively impressions on the right than the left. Finally, the motion of position and the muscular sense are everywhere preserved; the nutrition and heat of the paralyzed parts have not undergone any injury.

To resume, then, the paraplegia of our patient is thus characterized; it dates back two months, it developed itself within three days, voluntary motion is completely lost on the right, incompletely on the left; the reflex movements are exaggerated on the left; the sensibility is perfect on the right in all its methods, on the left the sensibility to pain is abolished, the thermal and electrical sensibilities are diminished; there is a retention of urine contemporaneous with the débût of the paraplegia; the nutrition and contractility of the paralyzed muscles are intact.

With these precise contributions we can proceed to the pathogenetic diagnosis.

Does the paraplegia result from a functional trouble of spinal innervation, or a material lesion of the marrow? Such is the first question to resolve in all analogous cases. Here the response is easy. The patient has been stricken with paralysis while in good health; we have not then to occupy ourselves with those obscure paraplegias of doubtful origin, which develop themselves in the train of acute diseases, or cachectic

affections. On the other hand, the paraplegia has coïncided from its beginning with a retention of urine; now, of all the paralyses called functional, the hysterical is the only one which presents in the beginning this important symptom. The sex of our patient frees us from an examination of this eventuality without considering that the unilateral exaggeration of the reflex movements, and the disorders of sensibility regularly limited to a single side plead strongly against it. Our paraplegia is then of the organic class, it depends upon a material lesion of the spinal marrow. We will determine now, if it be possible, the seat and the nature of this lesion.

The diagnosis of the seat of lesion embraces two distinct questions: At what height is the situation of the alteration? Which are the columns affected? The first point offers no difficulties. The muscles of the inferior members being alone paralyzed, the lesion cannot mount up to above the superior part of the lumbar swelling; it is then perceptibly on a level with the tenth dorsal vertebra; furthermore, the segment of marrow situated beneath this point is not altered in its structure, since the paralysis is of but two months date, and the nutrition of the muscles is not modified any more than their contractility; it is only the conductibility of the marrow which is interrupted, the action proper which it exercises upon the muscles and nerves is entirely stopped. That which fails in the inferior members is solely the cerebral influx, which cannot longer come to them; but the spinal influx comes, as in the physiological state. Consequently, even in the admission that the lesion, which has its superior limit at the tenth dorsal vertebra, involving the spinal marrow up to its termination, it is certain that it acts upon it only superficially, because the proper action of the inferior segment, I repeat it, is remaining intact.

Among the proper elements of the spinal marrow, there are the columns of motive power, or anterior spinal system, which are the most compromised; the almost absolute abolition of voluntary movement in the two members proves this clearly. The integrity of tactile sensibility, the absence of certain eccentric

manifestations, such as formication, painless prickings, a sensation to the touch of down or feathers, which is nothing more than aberrations of the sensibility of contact, tend to establish the fact that the white posterior cords are not implicated; on the other hand, the absence of pain, so clearly and generally marked in the left limb, indicates that the grey substance presiding over perceptive sensations, participates in a certain degree in the alteration. This assertion is the more authorized, since the lack of the sensation of pain exists here without anæsthesia. The roots of two orders are intact; this is proven by the preservation of the reflex movements. Finally, I think I can advance a little, and affirm that the lesion is not symmetrical; it is plain on the two halves of the marrow, but is more striking on the right half than on the left. Here are the reasons justifying my proposition. The paralysis is more complete on the right than the left; and as the columns presiding over movement (kinésodiques) undergo no decussation, this single fact already shows us that they are more changed on the right side; but this is not all; the amelioration which this patient has presented for the last three weeks that we have observed him, is thus established: A gradual return of motility in the left limb, and no change of motility in the right; consequently the lesion of the left half of the marrow is in process of diminution, that of the right half is as it was the first day. We are then, evidently, authorized in admitting that to-day, at least, the alteration is not symmetrical, and it predominates in the right half of the organ. This fact lends an unexpected interest, if we bring in connection with it another phenomenon which I have previously established in your presence this morning. The sensibility, we have said, is not altered, except on the left, and this alteration persists too in the same degree, although the motility may be notably restored to this side; in this situation I do not hesitate to attribute the trouble or the sensibility of the left member to the persistent lesion of the right half of the marrow. If it were otherwise, the abolition of the sense of pain would be improved parallel with the power of voluntary

movement; besides, he has never had any trouble in the sensibility of the right side, although the alteration has been here more marked than in the other, and we have in this case a proof of the decussation of the tracts of sensation in the marrow. Observe well what takes place. The lesion mends on the left, the movement reäppears; but the lesion persists on the right, the abolition of sense of pain (analgésia) remains entire on the left, as the abolition of movement power remains (akanésie) on the right side, my conclusion appears unassailable. This precise observation, although purely clinical, furnishes a real support to a physiological fact often contested; besides, it is not the only one which bears out this teaching. In a case observed by Oré, the sensibility was affected on the left, a fungoid vegetation compromised the right lateral half of the spinal marrow; in another instance from the same author, the sensibility was very obtuse on the right, a blood-clot occupied the left lateral half of the cervical portion.* Brown-Séquard has reported certain facts of the same kind in his book upon the central nervous system;† and in presence of these observations, and in the presence of that which we have before our eyes, I do not think that any doubt can rest upon this semiological proposition; when in a paraplegic the sensibility is lost on a single side, one can admit a lesion of the means of communication of the perceptive sense (voies æsthésodiques) on the opposite side.‡ In 1865, Bazire, of London, published a fact which, like this of ours, deprived of anatomical confirmation, was not the less demonstrative, as the author very properly viewed it. He had charge of a man aged thirty years, affected with paralysis of motion in the lower limb, and with paralysis of cutaneous sensibility in the right limb.§ The lack of motive power being limited to the left, it was evident that it was the left half of the

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* Oré, Memoires de la Societé de biologie. 1854.

† Brown-Séquard, Lectures on Physiology and Pathology of the Nervous System. Philadelphia. 1860.

‡ Jaccoud, loc. cit., p. 538.

§ Bazire, "The Lancet," ii., 1865.

marrow that was changed in structure, and the disorders of sensibility on the right ought to be necessarily the result of this left unilateral alteration. With the patient of Bazire's, as ours, it was especially the sensibility to pain which was altered; now a fact pointed out by Brown-Séquard can account for this peculiarity. The illustrious physiologist has established the fact that the filaments conducting tactile impressions run a certain course in the spinal marrow before crossing, whilst the filaments, affecting painful impressions and impressions of heat, undergo their decussation from their entrance into the spinal axis. As the assemblage of symptoms in our patient obliges us to localize the lesion very low, towards the inferior extremity of the marrow, one can conceive that at this level the filaments of the sense of pain and heat have already crossed, whilst the tactile bands are still in the direct ascending track which precedes their decussation.

What is certain, in any event, is, that the lesion is predominant in the right portion of the spinal marrow, and this fact, which demonstrates the voluntary motility from right to left, could be foreseen from the results of spino-muscular electrization. Below the lesion, the current passes equally well from the two sides. Above the lesion, it passes much better to the left than right; there then exists from this side an obstacle to its passage, and this obstacle is null, or less powerful from the side opposite. You see, gentlemen, that the new phenomenon which we have observed in our patient, is far from being without importance; it is one means, and one sign more for the determination of the precise seat of the lesions of the marrow, and in a question so difficult, no element ought to be left aside.

The nature of the lesion can here be very easily determined; the paraplegia is developed in three days, in a man of good health. He had neither fever, nor spinal pains, nor pains at the waist, nor convulsions, nor contractures. On the other side the lesion is very limited in the vertical sense, the portion of the marrow situated below is not altered in its structure, and the alteration has always predominated from one side. I can only

see a compression of the marrow which can fill this union of conditions. Paraplegia of rapid invasion is observed, it is true, in acute myelitis, in acute meningitis, in hæmorrhage within the spinal cord, (hématerachis), in meningo-spinal congestion, and serous effusion of the spinal cord, (*hydrorachis;*) but it is accompanied by febrile or painful symptoms, which have all been absent in our man. Furthermore, these lesions scarcely produced a disorder as limited as that with which he is affected. Compression of the spinal marrow, which I admit in him, if it exists antero-posteriorly, it is the anterior columns which are suffering the most; but on the right side the marked compression has compromised the grey elements of perceptive sensation of the posterior spinal system; hence the loss of thermal sensibility and the perception of pain on the left.

Such is the pathogenetic diagnosis of our paraplegic; it is entirely founded upon the physiological interpretation of symptoms; and as the case is very clear, an analysis permits us to disengage all the peculiarities of the lesion of the spinal marrow. You can ask nothing more complete—this is the physiological diagnosis par excellence—it is perfect. Here, gentlemen, appears in its full light the superiority of medical diagnosis over physiological diagnosis; and I am happy that this occasion permits me to enable you to touch with your finger this capital truth which some would vainly contest. This diagnosis, so precise, that we have dictated its physiology, what does it furnish to the prognosis? what does it teach for the treatment? Nothing; absolutely nothing; this is a dead letter. Our man has a compression of the marrow at a level of the tenth dorsal vertebra; this compreesion is stronger on the right than the left; it has interrupted the conductibility of the motor colums of the two sides, and sensory tracts of the right side, but it has respected the posterior white cords and the two orders of roots, which you observe are perfect; but knowing this, can we be useful to the patient who cares only for one thing, to recover the use of his limbs? No; a thousand times no! These scientific contributions so laboriously acquired are sterile;

the physiological diagnosis is strikingly impotent, it says nothing touching the treatment applicable to him. Very well, substitute the physician for the physiologist, cause the clinical diagnosis to intervene, and from the beginning you know what to think of the future of the patient, and how to set about treating him. This man is syphilitic, and this single word, which is a résumé of the medical diagnosis, reveals to us all at once the nature of the compression undergone by the marrow, the prognosis of the paraplegia, and the therapeutical indications.

This individual, up to now, has only had what are termed secondary accidents; it is not certainly the tertiary; at the most there is foundation to admit that he is arrived at that phase of transition which generally separates the superficial syphilitic determinations from the profound; he presents no visible lesion of the skeleton, and in this situation we can scarcely invoke, as a cause of the compression of the marrow, an exostosis or a vertebral periostosis. I am readier to think he is affected now with meningeal lesions of the kind of those described by Knorre;* these are circumscribed exudations of the meninges which can remain latent if they are very small, but which, when more considerable, can act by compression and determine paraplegia. These lesions herald the tertiary period properly called, they are anterior, in the chronological evolution of the malady, to the alterations of the bones and those of the viscera; and for all these reasons I attach myself to the idea of Knorre, exudations limited to the meninges and consecutive compression of the anterior face of the marrow. To admit a lesion of the skeleton would be, under these particular conditions, an hypothesis but little authorized; to admit a lesion of the marrow would be still more rash, for I only know of two examples of syphilitic tumor of the marrow, and you may see what is their value. One of the two, that of Wagner, only consists of an anatomical description; it is not a question of paraplegia, and the author himself expresses doubts of the

* Knoore, Ueber Syphilitische Lähmungen. (Deutsche Klinik, 1849).

nature of the tumor which was found in the left half of the cervical marrow.* The other fact, is that of McDowell; the patient, a young man of twenty-four years, who bore upon his body the traces of syphilis, died with eschars a month and a half after the appearance of paraplegia. On autopsy, the meninges were found sound, and in the dorsal portion of the marrow a tumor of a yellowish color, of the volume of a large pea, and of a very firm consistence; the nervous tissue which surrounded it was softened and injected.† Was this a syphilitic production, as McDowell thought? The thing has been contested, in view of the absence of microscopic examination, and the prompt death of the patient; however it may be, there is the balance of syphilomata of the marrow; this is too little yet for legitimatizing a diagnosis.

As to prognosis, it is modified, taken all in all, by the medical character of the paraplegia; this is a syphilitic paraplegia of still recent origin, with osseous lesions, and it will be cured. I said on the first day of observation, I repeat it to-day, proof in hand, since during three weeks there has been produced in the patient a considerable amelioration.

The treatment adopted has been the mixed, based upon the simultaneous employment of mercury and iodide of potassium. This, under such circumstances, is the most potent medication. I have seen, in analogous cases, that is to say, in the visceral syphilitic lesions, the iodide of potassium administered alone, completely fail, although the daily dose was very high, and the amelioration commenced manifesting itself from the first days of the mixed treatment. This difference in the action of the two medications can be rigorously appreciated in syphilitic albuminuria, of which I have seen many examples at the Lourcine Hospital; whilst I gave the iodide of potassium, raised even up to four and five grammes a day, the quantity of albumen contained in the urine was invariably the same. Scarcely had I added the mercury for five or six days than the albumin-

* Wagner, Das Syphilom des Nerveusystems. (Archiv. der Heilkunde, 1863).
† McDowell, Case of Paraplegia. (Dublin Journal, 1861).

uria diminished, and approached gradually to a cure. And note that these things have passed in the same manner with a woman, who, with her albuminuria, bore ulcerated gums, and who found herself consequently in an advanced period of syphilis.

Many physicians, for the more easy application of the mixed treatment to their patients, use the syrup known under the name of the *Sirop de Gibert;* it contains to the cup of soup of twenty-five grammes, one centigramme of the biniodide of mercury, and fifty centigrammes of iodide of potassium. After having many times tried it in my service at the Lourcine, I have renounced this medicament; it is unfaithful in its effects, badly tolerated by the patients, and the dose of the iodide of potassium is absolutely insufficient. I cause the mercury and the potassium to be taken separately; I give every morning one, rarely two pills of Dupuytren, which contain each a centigramme of sublimate, and twelve to thirteen milligrammes of extract of gum opium; then in the afternoon I give the iodide of potassium in the initial dose of a gramme per day, a dose which I augment rapidly, if there is any occasion to, up to four and five grammes. A comparative study of the protoiodide of mercury and the bichloride has caused me to completely renounce the first of these medicines.

It has been in accordance with these principles that I have treated our paraplegic; the dose of the bichloride has not exceeded two centigrammes, that of the iodide of potassium is already five grammes for some days since. For the rest I have only had to continue the treatment which had been instituted by one of my colleagues in the hospital; the patient first entered the service of M. Pelletan, who was kindly willing to consign him to me, in order that I might utilize him for our clinical studies. For three weeks, I have already told you, rapid improvement has taken place, and I do not doubt but that the cure will soon be accomplished.

A little later the retention of urine ceased, and the motility was normal in the left limb; the patient then, during several

days, presented a paralysis of movement of the right, and a simple analgésia of the left limb; this particular march of accidents completes the demonstration of the influence of the lesion of the right half of the marrow over the troubles of sensibility of the left. This man then reëntered the service of M. Pelletan, and I have learned that his case terminated by a complete cure under the action of the same medication.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I.—THE SOUTHWESTERN KENTUCKY MEDICAL ASSOCIATION. Reported for the "Richmond and Louisville Medical Journal."

This Association met in the city court room, at Paducah, Ky., on Thursday evening, October 12, 1871, 7½ o'clock. The meeting was called to order by Dr. D. A. Maxwell, the President. The minutes of the last Convention, May 25th, were read and adopted. The election of new members then followed, and some ten or twelve physicians came forward and signed the Constitution and By-Laws.

The Association now consists of thirty-five members, representing a majority of counties in the First Congressional District of Kentucky.

Reports of committees being in order, Dr. J. G. Brooks, of Paducah, read a partial report upon the history, nature, and treatment of *chancre*. His paper evinced much sound industry and care, and reflects great credit upon its talented author. The report was discussed by Dr. J. W. Thompson, of Paducah, Dr. Watson, of Mayfield, Dr. Singleton and others. Dr. Brooks was granted further time to finish his paper, which, so far, was well received by the Society.

Dr. J. W. Thompson read a lengthy report upon "Resections

and Conservative Surgery." His paper embraced an account of forty-three cases of resection of the different bones of the human body. The report is full of interest to the Medical Profession. Dr. Thompson having been appointed on the Committee on Resections by the Kentucky State Medical Society, was allowed by this Society to retain his paper, continue his investigations, and report to the State Society at Louisville in April next. Dr. Thompson informed the Society that he is performing resections on inferior animals, so as to settle the question as to whether the reproduction of bone is *solely* due to *periosteum*, or not.

Dr. Rivers, of Ballard county, reported three very interesting cases that had occurred in his practice: One a case of poisoning by morphine successively treated with the ext. of belladonna as an antidote; a case of difficult labor, and a case of urethral hæmorrhage. Dr. Rivers's reports were referred to the Committee on Publication.

Dr. Robinson, of Florence Station, gave an account of "Gastric Hæmorrhage," accompanying labor at full time, treated by bleeding successfully to the amount of twenty (20) ounces.

Dr. Watson, of Mayfield, made a verbal report of a case of "Opium Poisoning," which he treated with emetics, strong coffee, and *veratum viride*. Dr. W. is firmly convinced that the veratum was the principal agent in the relief of his patient, who happily recovered. The use of veratum as an antidote to opium is an important subject for scientific investigation, and one in which the Profession is not well enough instructed. This seems to be the opinion of the members present. We hope to have the honor of reporting more facts upon this subject, as our worthy President has requested the physicians composing the Association to report from time to time any new facts that may be discovered in the history of the new antidote to opium.

Dr. Brooks reported a case of "Opium Poisoning" treated by free emesis and tinc. of belladonna. The patient recovered.

Dr. J. W. Thompson, a case of like character treated successfully by flagellation. He mentioned also a case of "Belladon-

na Poisoning," treated by small doses of paregoric, given at brief intervals—cured.

Dr. W. R. Robinson furnished the Society with the notes of a case of "Belladonna Poisoning" relieved by one-half grain done of sul. morphine.

Dr. Anderson, of Fulton Station, then made some very pointed and practical suggestions in regard to the treatment of simple hæmorrhages with the muriate tinct. of iron.

Dr. Senter, of Ballard county, followed with some very interesting remarks in regard to antidotes in general, and the antagonistic effects of various remedies in the human system. Dr. Senter was requested by the Association to write and report any views and suggestions he might have to offer at the next meeting.

Adjourned until to-morrow at 8 A. M.

October 13.

The Association convened at Dr. Saunders's office, the President, Dr. Maxwell, in the chair.

Dr. E. B. Richardson read a paper upon "Diseases of the Eye." He also reported a case of "Otorrhœa," attended with perforation of the membrana tympani, with subsequent healing of that important membrane, and with the hearing almost as good as ever.

Dr. J. W. Thompson reported an instance in his practice of healing of same membrane, followed by better hearing than that in the opposite ear, in which the membrane was thickened only. Dr. Thompson thinks that the subject of ear diseases is neglected by the Profession, generally, too much. He coïncides with the German writers, that more good can be accomplished in relieving partial deafness than is generally supposed. He urged the importance of warm-water injections to remove foreign bodies in the ear and nose. Dr. Richardson opposed the use of the ordinary syringe in such cases. Dr. Brooks advocated it. Dr. Thompson suggested the propriety, when making the injections, of putting the ear upon *the stretch*, otherwise you will fail to have the water reach the offending substance with

sufficient force to dislodge it or even properly cleanse the part affected.

Dr. Watson, of Mayfield, then took the chair, in lieu of Dr. Maxwell, indisposed.

Dr. Senter, of Ballard county, made a few remarks upon the treatment of "Dysentery" with large doses of ipecac, in which he strongly advocated the practice. He called for further information on the subject from members of the Association.

Dr. R. Saunders, of Paducah, referred to Dr. Cartwright's treatment of this disease many years since, viz', one drachm of ipecac and forty gtts. of tinct. opii. This is known as the *one-dose remedy* in dysentery. Has used it in a modified form, yet not so heroically as the late Dr. C. While he (Dr. Saunders) has great confidence in the ipecac plan, under certain circumstances, admirable to its use, he does not consider ipecac a specific for the disease in question by any means.

Dr. J. W. Thompson reported four cases which lately occurred in his practice: One case of dysentery cured by four grains of ipecac and a half grain opii. every four hours until four doses were taken; another relieved by fifteen grains of ipecac night and morning every second day; and also the cure of a negro woman, entirely restored, by giving her thirty grains of ipecac night and morning. The ipecac did not vomit in these cases, but produced free bilious discharges. He permitted his patients to take but little water or any other fluid for five or six hours after taking the ipecac. Dr. Thompson remarked that the ipecac caused but slight nausea. Dr. T. has great confidence in the old standard remedy, opium, in the treatment of dysentery. It relieves nervous excitability and favors the operation of other remedies upon the inflamed mucous membrane.

Dr. Anderson wished to know of Dr. Thompson what is the poisonous material upon which the disease in question depends.

Dr. T. had nothing but standard authority upon the subject.

Dr. Anderson favored the *malarial origin* of dysentery, and treats his cases successfully with large doses of quinine, as both

a *sedative* and an *antidote*, thereby relieving pain and tenesmus, and *removing the cause* of the complaint. He sometimes gave small doses of opium at the commencement of the attack, but his main reliance for cure is in large doses of quinine given at brief intervals. Dr. Anderson has had no experience in the ipecac treatment.

Dr. Robinson mentioned a case, recently under his care, in which he gave forty grains of ipecac and two grains of opium during the twenty-four hours. The patient got well rapidly; no vomiting, and but little purging followed.

Dr. Rivers wished to know of Dr. Thompson the *modus operandi* in which ipecac relieves dysentery.

Dr. T. thinks that the relaxation produced by the remedy favors the escape of the poison producing the disease through the skin and mucous membrane.

Dr. Saunders finally remarked that he relies more upon ipecac in the treatment of dysentery than upon any one remedy.

Dr. Senter mentioned a case of puerperal convulsions, after delivery, that he lately had in charge, in which he gave, *in all*, one hundred and forty grains of bromide of potassium and one ounce of tinct. of valerian in the course of a day.

Dr. Anderson had a case of like character occurring ten days after the birth of the child. He relieved the woman by simply elevating a prolapsed womb.

Dr. Woodson, of Woodville, alluded to two cases of nausea in early pregnancy, caused by prolapsion and retroversion. Both cases were relieved by putting the womb in proper position.

Dr. J. W. Beeker, of Paducah, is of the opinion that puerperal convulsions are most fatal after delivery. Dr. Senter agrees with Dr. B., and such seemed to be the belief of the members present.

Dr. Saunders called the attention of the Society to the use of ice as an effectual means of arresting *uterine hæmorrhage* during child-birth. He has used it frequently in such cases, and with the most gratifying success.

Dr. Saunders not only puts the ice far up into the vagina, but into the body of the womb itself.

Dr. Thompson warmly indorses Dr. Saunders in this matter, and fifteen years' experience of the writer fully confirms him in the efficacy of ice in the prompt arresting of flooding in child birth.

The President appointed delegates to the Kentucky State Medical Society, to meet in Louisville in April next, viz., Dr. J. W. Thompson, of Paducah; Dr. Slaughter, of Ballard county; Dr. Robinson, of Florence Station, and Dr. Rivers, of Ballard.

The Association then passed a resolution unanimously inviting the State Society to hold its meeting, in 1873, in the city of Paducah.

Dr. Saunders offered a resolution of thanks to Drs. Thompson Brooks, and Richardson for their excellent labors in behalf of the Society, and for the prompt and able manner in which they have discharged all of the duties assigned to them. Passed without dissent.

And then, with peace and harmony prevailing, the Association adjourned to meet at Paducah, May 25th, 1872.

REPORTER.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

VIENNA, AUSTRIA, December, 1871.

Mr. Editor,—Professor Billroth has lately published an article relative to his experience in the operation for ovariotomy; in this essay he says that it is most desirable that the physician should give up the idea that ovariotomy is one of the most dangerous operations. I think it desirable that this assertion, coming from so reliable an authority, should be published to all rational physicians. Recovery is the rule after an operation

performed with the requisite skill and dexterity, a fatal termination is the exception to the rule, and is steadily becoming rarer and rarer.

For the purpose of comparison, Billroth tells us that ovariotomy is, according to reliable statistics, less dangerous than the amputation of the thigh, the exarticulation at the hip or shoulder-joint, resection of the hip or knee-joint. The danger following an operation for ovariotomy is about equal to that resulting from a high amputation of the arm, a resection in the shoulder-joint, the partial resection of the superior maxilla, lithotomy in youthful and vigorous subjects, and other operations of an equal degree of severity.

The operation in question should be performed according to the rule laid down by the leading English operators, as expressed in their classical works. Billroth says that he has had the good fortune to see two very complicated cases operated on by Spencer Wells, and thus, as well as by the verbal exchange of ideas, learned much from that extraordinary surgeon, and always makes it a rule to follow his advice.

Although Billroth's experience in this operation is comparatively small, the results which he has achieved are quite satisfactory. He has performed nine ovariotomies, of which two cases died and seven recovered, leaving a mortality of twenty-two and a half per cent.

Every one of these cases may be classed as complicated, for in eight of them numerous adhesions were found, while in the ninth, uterine fibroids complicated the case. The two cases which terminated fatally were recognized as of a doubtful nature before the operation was performed, owing to the numerous peritoneal adhesions in the pelvis, as well as the root of the mesentery and near the vertebral column.

I have dwelt upon this subject at this length because a celebrated and successful ovariotomist of New York, while delivering a course of lectures on the "Diseases of Ovaries and their Treatment," expressed opinions decidedly opposed to those taught by Professor Billroth. The gentleman referred to al-

lowed no opportunity to pass by without impressing upon his hearers the great danger attending and following the operation, and the necessity of always entrusting such cases to the care of experienced operators.

Until within a very recent period those cases of icterus, in which no trace of biliary acids could be found in the urine, were explained by Frerich's theory "of the incomplete oxidation of the biliary acids which had passed into the blood," and gave rise to the theory (Lyden's) of hæmatogenous icterus; because we could not believe that they were dependent upon a mechanical obstruction, which prevented the flow of bile into the intestinal canal. The fact that biliary acids were not to be found in the urine, as well as the fact first pointed out by Hoppe, that they were wanting in the bile taken directly from the gall-bladder, gave rise to the supposition that certain pathological changes taking place in the liver might prevent the physiological production of biliary acids.

In view of this supposition, it could not be very surprising if, in one or the other case of icterus bile, acids were not to be found in any of the excreta.

Dr. E. A. Golowin (Virchow's Archives, vol. 53, p. 4) endeavored to learn whether, after an icterus produced by artificial means, the biliary acids would gradually disappear from the urine. The positive results of these experiments do away with the necessity of searching for other than mechanical causes of icterus.

The experiments made upon dogs, in which it was endeavored to produce icterus, after ligation and consequent division of the *ductus communis choledochus*, were wanting in success, because the animals generally died within five and nine days after the operation, in consequence of peritonitis. Dr. G. afterwards modified his operation in such a manner that he produced a biliary fistula, after the ligation of the common bile-duct, and later endeavored to close the opening.

This operation was successfully performed on two dogs, only

one of which gave a direct result as to the influence of the retention of bile.

In this one, the canula fell out of the fistula on the eighth day, and on the fortieth day after the operation, the wound was entirely closed, and icterus set in. The fistula opened and closed itself several times during the 161 days, during which the observations were made, so that the wound was closed during forty-eight days altogether.

The icterus diminished regularly during the patency of the wound without disappearing entirely, but returned invariably after the closure of the fistula. The biliary acids could be detected in the urine, on the application of Pettenkofer's test, until the 155th day; after the 157th day they disappeared entirely.

The absence of the biliary acids in the urine of the icteric dog, during the closure of the fistulous opening, goes to prove that the reason for the absence of the acids, during the icterus, is not to be found in the supposed change of the hæmatine into bili-verdin, or in a peculiar kind of icterus without retention of bile. This proves the truth of the supposition, that certain pathological changes of the parenchyma of the liver might prevent the secretion of the biliary acids. Dr. Golowin also thinks that, this change taking place in the liver substance may give rise to other pathological conditions, aside from the retention of bile, because biliary acids are also wanting in such cases of icterus which have only lasted for a week.

A most interesting case of herpes zoster trigemini (first ramus) presented itself at the Ophthalmic Clinique of Professor Arlt a few days ago. As this is a comparatively rare affection, I will give a brief description of the case. The patient, a young man, aged eighteen years, of vigorous constitution, was seized by a severe pain on the left side of the head about twelve days ago. A week ago moderate swelling and redness of the skin made its appearance, and numerous vesicles soon covered the upper half of the left side of the face. The acute, tearing pain diminished to a certain degree after the appearance of the

eruption; otherwise the patient felt quite well, only complaining of a want of appetite. No signs of febrile affection discoverable.

The most numerous vesicles are seen on the forehead, nor is the side of the nose, the scalp, as far up as the upper border of the frontal-bone, the upper lid of the left eye or the skin covering the left temple, entirely free from the eruption. The median line drawn from the vertex to the tip of the nose indicates the limit of the eruption, at which point it stops abruptly. A line drawn from the left parietal protuberance to the left external auditory meatus is about the external border of the eruption. The temple is sparsely covered with vesicles as far down as an imaginary line corresponding to an extension of the external canthus of the eye. The vesicles vary in size from that of a millet-seed to that of a pea, and sometimes form confluent patches of considerable size, especially on the outer portion of the forehead. The contents of these vesicles are of a fluid syrupy consistence, and of a light yellow color.

On the capillitium only dried crusts are found. The cutis of the upper and lower eye-lid is entirely free from eruption, but is of a light red color, soft and so very œdematous that the opening of the eye is entirely impossible, the *conjunctiva bulbi* is also inflamed and swollen, but no eruption is to be seen.

The cornea is entirely unaffected, transparent and smooth, the pupil reäcts readily to the influence of the belladonna, no iritis is present.

I infer from the appearance of the case that the herpes zoster has affected that part of the face and head supplied by the first or supra-orbital ramus of the left trigeminal nerve, developing itself especially on the supra-orbital, naso-lachrymal, and temporal branches. This form of disease is seldom seen in Vienna, and Professor Arlt says that he, in his entire practice, has only met with two cases before this. In one of them, says Professor Arlt, the bulb of the eye was affected to such a degree as to cause paralysis of accommodation. The patient is re-

covering rapidly, the only therapeutics employed being of a constitutional nature.

Professor Klob, the well-known author of the recent work "On the Pathological Anatomy of the Sexual Organs of the Female," sometime since delivered a lecture on the physiology of menstruation, in which he reviewed the present teachings on the subject, and explained the changes taking place in the uterus and the ovaries. He said that the only source of the menstrual flow was to be found in the blood vessels of the uterine mucous membrane. Pflüger and Waldeyer are right in denying that the hæmorrhage emanated from the gräffian follicle, for aside from the impossibility of the envelopment of a ripened follicle by the fimbriated extremity of the fallopian tube, no trace of blood is ever found in the peritoneal cavity.

Klob does not deny that probably in the majority of cases a hæmorrhage takes place in the cavity formed by the expulsion of the ovule from the ovary. This was beautifully illustrated in two specimens presented by the lecturer.

The latest contribution on the subject by Friedlander describes at length the changes which the mucous membrane of the uterus undergoes during pregnancy. We have, often enough, had opportunities to study the changes taking place during pregnancy, on the cadaver, and have convinced ourselves that, on the whole, but slight differences are presented by the mucous membrane of a uterus enlarged during the menstrual process and by that of an organ enlarged during pregnancy. This gives us an explanation for the fact that it is often difficult to determine whether the uterus is simply enlarged during the menstrual process or whether an ovule has been aborted after conception has taken place.

Rokitansky himself has often been unable to determine which of the two processes has taken place. The difficulties attend such an examination, in case we have an enlarged uterus, in which the mucous membrane of the body and fundus is detached and is substituted by the proliferating sub-mucous layer, called by Friedlander the glandular stratum of the decidua.

The question, whether dysmenorrhœa membranacea can be called abortion during the first weeks of pregnancy, cannot be determined with certainty in very many cases. Nor does the appearance of the corpus luteum always afford us a satisfactory explanation, for we can very easily imagine that, owing to the influence of an increased congestion, the hypertrophy of the yellow layer may be such a marked one as is generally attributed only to the influence of the gravid congestion of the sexual organs.

The absence of the menses is not always owing to an insufficient congestion of the uterine mucous membrane, nor does amenorrhœa always produce sterility, as is so often asserted by gynæcologists. That method of treating sterility due to amenorrhœa, whose only aim is to irritate the mucous membrane and thus produce hæmorrhage, cannot be justified in any way whatever. The most recent plan of treatment, which, by applying suction to the uterine mucous membrane endeavors to cause a flow of blood, is even more condemnable, because it is more probable that the poor woman will be afflicted with a polypus than blessed with a child.

Professor Bamberger, of Wurzburg, has at last been chosen to fill the vacancy in the chair of Special Pathology and Therapeutics and Clinical Medicine, caused by the death of the lamented teacher, Professor Oppolzer. The choice of the Medical Faculty, which, fortunately, was sanctioned by the present Minister of Education, is a very satisfactory one to all concerned. I doubt whether a better man could be found to fill the position. Professor B. will open his course of lectures next semester, *i. e.*, after the coming Easter holydays.

The sanitary condition of Vienna is very unsatisfactory, for, aside from the numerous deaths from tuberculosis which, are caused by the inclement weather now prevailing, we are afflicted by the presence of a number of epidemics. Small-pox, measles, scarlatina, and diphtheritis are, unfortunately, very prevalent, and the mortality is proportionately great. The first-mentioned disease is also raging in the Provinces, and in a small town of

8,340 inhabitants, 211 cases of variola have ended fatally within the last six weeks. Among these were 114 children less than twelve years of age, of which 112 had never been vaccinated.

R. C. Brandeis.

St. Louis, January 22, 1872.

Dr. Gaillard, Louisville, Ky.:

Dear Sir,—Please give the enclosed space in the *next number* of the "Richmond and Louisville Medical Journal," and you will very much oblige us. Many of our graduates could probably be reached only through your Journal.

Truly, yours, Jno. S. Moore.

To the Alumni of Missouri Medical College.—We take pleasure in informing you that the graduates of this institution, resident in St. Louis, have formed an Alumni Association, which, it is hoped, will include every graduate, now living, since its first organization as Kemper College, in 1840, to the present time.

The objects of the Association are as follows:

1. To preserve and cultivate social and fraternal relations originating in student life.

2. The collection of materials for the museum of comparative and pathological anatomy.

3. The establishment of a library and reading-room.

4. The collection of a fund for the education of orphans of the alumni, and others who may become members of the Association.

5. To subserve medical education, and especially to foster the interests of our beloved *Alma Mater*.

6. To commemorate the old Professors, and especially the founder of the institution.

The first annual meeting and banquet will take place at the Polytechnic Building, St. Louis, March 6th, 1872. The annual address will be delivered by Prof. Jno. S. Moore. All those who can attend may be assured of a cordial greeting and pleasant reünion. Those who cannot will confer a favor by sending their *address* to the Secretary.

The initiation fee is $5, and the payment of $10 will secure life membership, with a certificate furnishing the same evidence of graduation that a diploma does.

Graduates of other schools may be proposed by a member for honorary membership, and if elected may be made life members by paying the established fee. Fraternally,

G. M. B. MAUGHS, M. D., *President.*

R. S. ANDERSON, M. D., *Secretary.*

PADUCAH, KY., December 22, 1871.

Dr. E. S. Gaillard:

Dear Doctor,—Why is it that in all the works and articles that have been written upon *uterine hæmorrhage,* there is nothing said of the introduction of lumps of ice *into* the *womb?* The womb is always in condition to receive it after *abortion* or *labor.* The os is open low down, and a lump of ice, the size of a hen's egg, may be readily passed into the cavity. From my experience, it is a simple, *safe,* and *certain* means of arresting the flow. No use for iron per. sulph. injections, astringents, ergot, or anything else. It is nearly always at hand, and produces no unpleasant results—more than the pain from contraction—just what is desired for the safety of the patient. I have resorted to it in all cases of alarming hæmorrhages which have occurred with me for the last fifteen or twenty years with unfailing success.

If you think this worthy of being shown to the Profession, you can publish it. R. SAUNDERS, M. D.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

ART. I.—PULMONARY CONSUMPTION—ITS NATURE, VARIETIES, AND TREATMENT, WITH AN ANALYSIS OF ONE THOUSAND CASES TO EXEMPLIFY ITS DURATION. By C. T. B. WILLIAMS, M. D, F. R. S., and C. T. WILLIAMS, M. A., M. D., Oxon. Philadelphia: Henry C. Lea. 1872.

All respectable students (graduates or under-graduates) will

recognize, in the caption given, the series of admirable papers which appeared in the "London Lancet." Most of them were republished in this Journal. It is, therefore, superfluous to analyze them. For the benefit of recent subscribers, (and they are very numerous), it is necessary and proper to say, that on the subject of pulmonary consumption, there is no article which, in its conciseness, completeness, practical character, and exhaustiveness, can compare with this one of the Drs. Williams. It is a standard work; every physician should not only read it, but own a copy of it. It is recommended without qualification. It is republished by Mr. Lea in excellent style.

ART. II.—REPORT TO THE SURGEON-GENERAL OF THE U. S. ARMY ON AN IMPROVED METHOD OF PHOTOGRAPHING HISTOLOGICAL PREPARATIONS BY SUNLIGHT. By Assistant Surgeon J. J. WOODWARD, U. S. A., Washington, D. C., 1871.

This very admirable publication, with nine beautiful photographs of quarto size, has just been received. Dr. Woodward has hitherto found that pictures taken by the electric and magnesium lights, or by the oxy-calcium light, were inferior to those obtained by sunlight. The sunlight produced difficulties of a practical character difficult to be overcome. By a recent discovery, he finds that the use of a condensing lens overcomes all of these troubles, and that pictures by sunlight are even better than those taken by other processes. His illustrations verify his claims. The designs sent are among the real triumphs of this artist, who combines with all of the dexterity and science of the photographer, the enthusiasm, research, and accurate knowledge of the pathologist. His labors are worthy of all praise, and the results of them are prized by all who prize the triumphs of medical science. His photographs are beautiful indeed. Surgeon-General Barnes is doing work, directly and indirectly, which reflects the greatest credit upon himself and upon those in immediate relationship with him.

ART. III.—ANNUAL REPORT (1871) FROM THE OFFICE OF THE BOARD OF HEALTH, Louisville, January, 1872.

This report has just been published. In its way, it is one of

the curiosities of the age. The multi-lingual inscriptions upon the Rosetta Stone may be prized by many, and the scarlet parchment versions of the Sinai Bible may induce a pardonable enthusiasm among scientists, but these, and all of the rare specimens which science has exhumed, and art embalmed, must pale their ineffectual fires beside the charms of this classic and wonderful paper. Space is insufficient for the criticism demanded; yet however brief the description may be, like a drawing of a single facet upon the surface of the diamond, it indicates the rarity and preciousness of the gem. How many are the lines upon which the eye lingers in wonder and astonishment? The physician reads of symptoms where he looks for diseases; he sees the names of diseases of which he has never heard; he sees terms which signifying nothing are yet given as representing morbid conditions causing death. In the direful year of 1871, 2 died of anascarca, the cause of this not being given; 14 died of apoplexy, the forms being withheld; 2 of asthma, the nature not stated; 2 of asphyxia, the cause yet concealed; 2 of Bright's disease of the kidney, not of any other of Dr. Bright's diseases!! 8 of cancer, whether colloid, encephaloid or scirrhus, not stated; 2 of "cerosis," what is this? 1 of cholæmia but 6 of jaundice; 8 in childbirth, whether from hæmorrhage, puerperal convulsions, puerperal fever, etc., who knows? 293 of consumption, whether this be apostematous or tubercular, or whether affecting brain, lung, mesentery, or kidney, not stated; 57 of convulsion, whether tonic or clonic, centric, tetanoid or tetanic, who knows? 35 of croup, the forms not stated; 1 of cyanosis, here is the symptom, what was the disease? diabetes 5, mellitus or insipidus is immaterial; "diptheria" 19, the word being misspelled; 54 of dropsy, here is the symptom, what was the disease? 2 of gangrene, what kind? 48 organic disease of the heart, whether this be valvular in character, hypertrophy, atrophy, fatty, or atheromatous degenerations, etc., who knows? 4 of hæmorrhage of bowels, no cause stated; 50 of hæmorrhage of lung, whether apoplectic, due to cardiac disease, tuberculosis, or inflammation, who knows?

2 of "hepitis", what is that? 2 of hypertrophy of heart, real name of disease being suppressed; 2 of "hypertrophy of liver," who ever died of this before? "intersuscep bowels," 3; "infancide," 6; 10 of marasmus, what is marasmus? paralysis, 28, what form? "parochitis," 2; "tonsilites," 1; "trachites," 1; "uremia," 4, etc. Comment is unnecessary. Such a report is a disgrace. It is not only valueless, but it tends justly to make medical men, in the judgment of the public, absurd and ridiculous. A Health Office which issues such a paper ought to be treated in but one way; it ought to be summarily abrogated, while those actually responsible for such puerile and ruinous emanations ought to be quickly consigned to lasting ridicule and proper obscurity. Physicians, or rather graduates in medicine, who issue such stuff, are simply public as well as professional opprobria. They disgrace the whole Profession, and ought to be condemned by every respectable member of it. Who are really responsible for this monstrosity?

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."---Hor.

Electro-Magnetic Burglar-Proof Curtain.—This invention consists in the arrangement of a burglar-proof curtain to be suspended in front of safes, vaults, behind windows, or in other suitable places, and connected with an electric alarm apparatus in such a manner that it will, when moved or pierced, cause the alarm to be sounded.

By the use of such curtain a very cheap and, it is claimed, most effective guard is obtained, which can, over night, be suspended in front of the things or openings to be protected, while during day-time it can be rolled up out of the way or otherwise do the service of ordinary curtains.—*Ex.*

Adulteration of Drugs.—At the meeting of the American

Pharmaceutical Association, held in St. Louis, a report on drugs was presented, which contained a number of curious statements in regard to the adulteration practiced by the trade. It is stated that several wholesale drug-houses in New York have rooms set apart for the purpose of adulterating powdered drugs. One establishment employs a foreman to take special charge of this department, all sorts of cheap substances being mixed with the more precious powders. Some dealers, in sending opium to the grinders, always send a certain proportion of licorice to be powdered with it.—*Ex.*

To Filter Alcohol.—The following method of filtering alcohol or its solutions is said, by the "Druggists' Circular," to be very satisfactory, and to be used extensively in North Germany, where it constitutes one of the secrets of the trade. Clean, unsized paper (Swedish filtering paper is the best), is to be torn into shreds and stirred into the liquid to be clarified. The whole is then to be strained through a flannel bag, when the resulting liquid will be found to possess the utmost clearness and limpidity. A filter may also be made by spreading thin paper pulp evenly upon stretched flannel or woolen cloth. When dry, the cloth so coated will be found to give better results than the felts, etc., commonly employed as filters.

Iodoform Ointment for Syphilitic Ulcers.—In the Boston City Hospital iodoform ointment, in connection with iodide of potassium, is extensively and successfully used in the treatment of syphilitic ulcers and rupia. Dr. W. Ingalls, attending surgeon, advocates this formula in two obstinate cases under his care: ℞.—Iodoform, ʒss.; Spts. vini rect., q. s.; Adipis sui., ʒ viiss. M.—*Boston Med. and Surg. Journal.*

Waterproof Starch is the subject of a French patent, and consists in passing the goods, after being properly starched, through a bath of chloride of zinc at a temperature of about 60° Fahr. The starch will then remain in the clothes after several washings.—*Scientific American.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Acute Synovitis—Incision into the Joint.—Mr. J. R. Jessop, F. R. C. S., in a lecture published in the "British Medical Journal," states that he lately successfully followed Professor Lister's plan, and incised into the knee-joint of a patient aged twenty years, who suffered from acute synovitis, after the ordinary treatment adopted in such cases had been tried. *i. e.*, rest, leeches, ice, evaporating lotions, salines, etc. Mr. Jessop made an opening into the joint, and in the axis of the thigh, commencing one inch above the patella, the opening was an inch long, but had to be enlarged to one and a half inches to allow flakes of lymph to pass through, which were suspended in from eight to ten ounces of clear fluid. From the time the incision was made, the excruciating pain ceased, the fever disappeared, the swelling never returned, and the patient was sent from the Leeds Infirmary to a convalescent hospital with a movable painless joint within a month from the time of the operation.—*Canada Med. Jour.*

Diagnosis of Phantom Abdominal Tumors.—In an interesting clinical lecture published in the "Medical Times," Dr. J. M. De Costea states that the most efficient mode of diagnosticating phantom tumors of the abdomen is by the use of an anæsthetic. When under the influence of ether, a phantom tumor must disappear, and thus remove all doubt as to the nature of the case. He says, "not in a single instance have I found these apparent tumors remain when the patient is under the influence of ether or chloroform, though they reäppear, and quickly, when he passed from under its influence." Thus we can control the diagnosis not only of phantom tumors, but muscular contractions of the abdomen, not unfrequently feigned, and which high authority declares a source of difficulty almost impossible to get over."

MEDICAL NEWS.

'Nulla dies sine linea."

The St. Louis "Medical and Surgical Journal," formerly a Bi-Monthly, and the oldest medical journal west of the Mississippi, has appeared as a Monthly of fifty-six pages at $3 per annum. Drs. Linton and Baumgarten, the former editors, have retired. Drs. W. S. Edgar and H. Z. Gill takes charge of the Journal as editors and proprietors. The first number presents a good appearance. May the present editors do well.——— The "Medical Times and Gazette," of London, announces, in its issue of December, the death of twelve persons (in the previous week) over 90 years of age, one of 102 and one of 104 years of age.———The number of medical students in London this season is 1,468———The health of Baron Liebig is still precarious.———With the commencement of the new year several medical journals are resuming the execrable practice of publishing extracts from commendatory letters received. Such charlatanism is abominable.———The "New York Medical Gazette" has not appeared for six months.——— The last number of the "Baltimore Medical Journal and Bulletin," which has been received, is that for October, 1871.———Professor Robert Christison has been recently Baroneted.———Dr. Thomas W. Evans, an American, has recently been made Commander in the French Legion of Honor. This was done in recognition of his services as Director of the American Ambulance during the late Franco-German war.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

EDITORIAL BREVITIES.

Those who wish to learn the name of the author of any pa-

per published anonymously in this Journal, can do so by applying to the editor. Reviews, editorials, and sometimes letters and reports, are thus published. The names of the authors of the reviews and editorials are never given publicly. Such papers will represent the force of the Journal, not that of the writer.———In the last number the quotation "monumentum perennius ære," was unfortunately printed "monumentum perennius æris."———It seems from the verbal statements of Dr. C. Blackburn (to the editor) that he supposed Mr. Chiles to be so nearly moribund as to render treatment of any kind useless. Atropine was injected once by the bowel, but was not retained. At the inquest, he was but a witness.———Dr. Jerome Cochran's reply to the review of the Transactions of the Alabama State Medical Society, will appear in the March Journal. It refutes nothing, and practically admits the truth of all the charges made.———The essay on "Anæsthetics in Midwifery," contributed by Dr. L. P. Yandell, of Louisville, Ky., to the Transactions of the Indiana State Medical Society, is erroneously attributed by the "N. Y. Medical Journal" to Lansford P. Bundell, M. D. This is shameful. The essay, it is true, was a bundle of errors, but it is inexcusable to allude to it as the errors of Bundell.———Messrs. Baldwin & Co., of New York, offer to send a copy of the "American Journal of Medicine" to any one on receipt of 50 cents; the actual price being $1.50. Many can thus obtain a sample copy of this excellent work for an insignificant outlay.———The friends of Dr. L. G. Capers will be pleased to learn that this thorough gentleman and accomplished physician has been fortunate enough to marry Miss H. Hunt, the daughter of Colonel Harper Hunt, of Vicksburg, Miss., a young lady deservedly known as one of the belles of that State. "The interesting event" occurred on New Year's day—a new year, indeed, for the parties interested. May it be for them "the bloom of their happiness."———For every copy of this Journal for February, October, and November, 1871, 50 cents will be paid.

THE RICHMOND AND LOUISVILLE

MEDICAL JOURNAL.

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—A CRITIQUE OF LISTER'S SEPTIC GERM THEORY, AND THE USE OF CARBOLIC ACID AS AN ANTISEPTIC IN SURGERY. By JOHN D. JACKSON, M. D., of Danville, Ky. [Read at the Meeting of the Central Kentucky Association held in Lancaster, on Wednesday, January 17, 1872.]

It has been said, that "To give a general currency to a hypothetical opinion, or medicinal reputation to an inert substance, nothing more is required than the talismanic aid of a few great names; when once established upon such a basis, ingenuity, argument, and even experiment, may open their ineffectual batteries; the laconic sentiment of the Roman satirist is ever opposed to remonstrance: "*Marcus dixit? ita est.*" A physician cannot err, in the opinion of the public, if he implicitly obeys the dogmas of authority. . . . It is an instinct in our nature to follow the track pointed out by a few leaders; we are gregarious animals, in a moral as well as a physical sense, and we are addicted to routine, because it is always easier to follow the opinions of others than to reason and judge for ourselves; and thus do one-half of the world live as alms-folks on the opinions of the other half."*

* Pharmacologia, by John Ayrton Paris, M. D. London, 1843. p. 77.

Let authority raise the standard of novelty, and it is the fashion of the world to march blindly and unquestioning, for at least a time, at the heels of the standard-bearer. To-day the Medical Profession is furnishing an illustration that its ranks afford no exception to the rule, for since Mr. Joseph Lister, the illustrious son-in-law of the more illustrious Syme, published in the "London Lancet" of June, 1867, his paper "On a New Method of Treating Compound Fractures, Abscess, etc., with Observations on the Condition of Suppuration," have not the mouths of the men and the pages of the literature of medicine been filled with septic germs, and have not the wards of all the hospitals in the land been redolent of carbolic acid? Let him who disputes it but read the current medical journals with his eyes open, go into our medical schools with his ears open, and enter our hospitals with his nostrils unclosed, to be convinced.

A couple of winters ago we walked into and sat down in the amphitheatre of one of the largest hospitals of the West, and listened to the clinical remarks of a gentleman bearing one of the most eminent names in the history of American surgery, as he addressed the large class, which thronged the benches of the rotunda.

His first subject for illustration, brought in for the benefit of the medical neophytes assembled to see and hear, was a gray-headed old negro of some sixty-odd, who had just come into the institution with metacarpal bones sawn entirely through, the palmar-arch cut in two by a circular saw, and only the skin of the palm being left to attach the hand to the arm. Though two years have elapsed, well do I recollect the scene, and the substance of his remarks, as he undid the bloody wrappings improvised by the negroe's companions, and exhibited the condition of things to the class.

Said he: "Gentlemen, we have here a case in which I can promise you I will save the hand of the patient, a thing which I could not have done before the introduction of carbolic acid in the treatment of wounds. Now, carbolic acid is a powerful

hæmostatic, and I will pour some into this poor old man's wound, and check the hæmorrhage;" and at the same time, suiting his actions to his words, he poured out of a vial some pure carbolic acid into the wound, half whitening and soddening the raw flesh, but as he did so, he opened the wound to the bottom, and the radial and ulnar arteries of the palmar-arch began to spout freely. Said he: "The arteries composing the palmar-arch are of too large calibre to be stopped by the acid, but by torsion we will do so." Thereupon he applied his forceps vigorously, but the blood resuming its flow on his releasing his hold, he finally tied them, ascribing the failure to an atheromatous condition of the coats, due to the age of the patient.

The next subject presented, was a man with a syphilitic buboe, which he got ready to open, and premised the operation by telling his class to always be very careful of their fingers in opening a specific buboe, for fear of inoculating themselves. Thereupon he proceeded to make the necessary incision, in doing which he accidentally punctured his fore finger. After this unhappy demonstration, he coolly took up the vial of carbolic acid and touched the stopper freely to the site of the puncture, informing them that nothing was so good to destroy the syphilitic virus as the acid. The application of the acid, as in the negroe's case, was followed by a much freer flow of blood, and seemingly forgetting the remarks in the opening of his clinic about the hæmostatic properties of the remedy, he attracted the attention of his auditors to the fact, that carbolic acid always increased capillary congestion, and when applied to a superficial wound, would therefore at first increase the bleeding.

A few weeks later, and we were in an Eastern city, and in the lecture-room of one of the metropolitan Medical Colleges; we heard a young sub-professor who had just returned from a European tour, during which he had evidently been in Edinburgh, descant upon the virtues of carbolic acid, carrying his eulogium to a pitch very far beyond the clinical illustrations of the gray-bearded professor of the West. To credulous auditors it would have seemed very fitting that a statue of brass should

be erected to Professor Lister, and that to preserve the fitness of things, should be placed in juxtaposition to one of Pandora, and while the latter should be figured with her box in her left hand, containing all the ills which afflict the human flesh, the former should hold in his right hand a vial of carbolic acid, the panacea to all the ills to which flesh has fallen heir.

Now, instead of marching passively with the throng, singing pæans to the virtues of carbolic acid, and shouting hosannas to Mr. Lister as its apostle, we propose planting the standard of revolt, and occupying your attention for a short while by looking fairly at and boldly questioning the dogmas of Professor Lister.

In his paper, above alluded to, he commences by descanting upon "the disastrous consequences in compound fracture, contrasted with the complete immunity from danger to life or limb in simple fracture," which he concludes is induced by decomposition of the effused blood through the access of the atmosphere. Then questioning how the atmosphere produces decomposition of organic substances, he says "that it is not to its oxygen or to any of its gaseous constituents that the air owes this property, but to minute particles suspended in it, which are the germs of various low forms of life long since revealed by the microscope, and regarded as merely concomitants of putrescence, but now shown by Pasteur to be its essential cause." He says: "Applying these principles to the treatment of compound fracture, bearing in mind that it is from the vitality of the atmospheric particles that all the mischief arises, it appears that all that is requisite is to dress the wound with some material capable of killing these septic germs, provided that any substance can be found reliable for this purpose, yet not too potent as a caustic." Then after speaking of experiments made by him with this end in view, he says: "Carbolic acid proved in various ways well adapted for this purpose."

Now, though Pasteur and Tyndall have declared the atmosphere to be full of living organisms, and accepting their observations as fixed facts, Professor Lister has ascribed the origin

of purulent formations to these germs, he might have told us that their experiments have been repeated by equally eminent experimenters, and that such celebrated savants as Pouchet, Joly, and Musset, failed to corroborate them; but, on the contrary, declare that in certain localities the air is entirely free from both dead organic matter and living germs. As to the second part of Mr. Lister's assertion, that Pasteur has shown that the various low forms of organic life are not merely concomitants of putrescence, but its essential cause, there can be opposed no less an authority than Baron Liebig, who affirms, as the result of his observations, that fermentation takes place under the agency of mere dead nitrogenous matter, and the experiments of Gay-Lussac, of France, Gruithuisen and Burdach, of Germany, and Dr. Jeffries Wyman, of America, all tend to confirm the chemical doctrine, that "the oxygen of the air is the initiator or *primum movens* of fermentative changes."

When Professor Lister expresses himself thus regarding living germs and purulent formations, one would think he had surely never seen, or at least at the time had forgotten that he had ever seen a case of psoas-abscess, or hepatic abscess, or abscess of the brain, or cold abscess anywhere, neither the outer nor inner man presenting a broken surface for the entrance of the dreaded germs. But a fortnight since we had to open an abscess over the left tibia, and a few days later, one over the left radius (and there is one now forming over the left ulna), in a gentleman convalescing from typhoid fever, in whom there has at no time been an abrasion of surface, or any injury whatever.

Von Duben has found entozoa in the blood of quadrupeds, filariæ in dogs, and the strongylus armatus in the horse; Brauell vibriones in the blood of glandered horses. Dr. Lionel Beale amœboid-like germinal matter in animals with cattle-plague. M. Davaine bacteria in the blood of man affected with carbuncle, and the inferior animals affected with malignant pustule, and Dr. Richardson, of the Pennsylvania Hospital, has

found such infusoria, in small numbers, in persons in good health.*

In his "Illustrations of the Antiseptic System of Treatment in Surgery," published in the "Lancet" for February 1868, p. 93, American edition, Professor Lister says: "Admitting then the truth of the germ theory, and proceeding in accordance with it, we must, when dealing with any case, destroy in the first instance, once for all, any septic organisms which may exist within the part concerned; and after this has been done, our efforts must be directed to the prevention of the entrance of others into it." Now, if any one of the above observers may be credited, these air-pervading germs can penetrate our living organisms through other channels than open wounds, and since the lungs are the principal ærial conduit of we terrestrial breathing animals, the remedy which Professor Lister found "well adapted for the purpose," should in reason be directed to this channel also, and since, if we may believe the experiments of Dr. Richardson upon himself, published in the "American Journal of Medical Sciences" for July, 1868, and those of Dr. Neftel, published in the "New York Medical Record" of July 15, 1868, bacteria taken into the stomach may pass thence into the blood, then to exclude beyond peradventure the parasitic origin of suppuration, Professor Lister would have to not only fill his wounds with carbolized oil or stop them with his carbolized putty, but at the same time, along with this, filter his patients' air and water, and be necessitated to adopt something like the method of the kidnappers of the past century, and commence the treatment of each patient suffering compound-comminuted fracture by slipping a carbolized plaster over mouth and nostrils.

But, casting aside the consideration of the mode of entrance of septic germs, and the place at which to attack them, is the parasiticide which Mr. Lister found so "well adapted for the purpose" *really* so reliable; such a fatal agent to these lowest forms of organization?

* Richardson's Hand-Book of Microscopy. Philadelphia, 1871. p. 194.

That it is most powerfully and effectually so, beyond all other articles of the Materia Medica, he would certainly fain have us believe, and that Mr. Lister and his followers have found it to be so even beyond their first sanguine anticipations, may be inferred from their practice, for as time has advanced, they have used it more and more dilute, until now we believe the general conclusion is, that the sixteenth, twentieth, thirtieth, and even fiftieth part of the acid, to the bulk of the fluid, possesses all the good effects without the attendant inconveniences of the concentrated solutions at first used.

But when we examine, microscopically, these carbolized fluids, we find no confirmation of the wonderful germ-killing powers with which the Professor has endowed carbolic acid. MM. Béchamp and Estor, and certain Italian observers, have observed that bacteria multiplied in carbolized fluids, and Dr. Charlton Bastian has found that torulæ and bacteria, "mounted as microscopical specimens, in a mixture of glycerine and carbolic acid, not unfrequently grew and multiplied under such circumstances," and that its addition to, and subsequent boiling with a hay-infusion, actually increases the fermentability of the latter.*

But Mr. Lister has found another wonderful virtue in the acid, for not only will it destroy the germs so hurtful to man, indeed, if the acid is applied of sufficient strength to act as a caustic, he regards this as of little moment. "For," says he in the article above alluded to, "experience has abundantly shown that parts killed in this way, including even portions of bone, became disposed of by absorption and organization, provided that the subsequent part of the treatment is properly managed." In his first article, in his relation of case 3d, John A., a moulder in an iron foundry, who had a compound fracture of his right leg, he goes on to say, "On the 7th of June, nearly three weeks after the accident, an observation of much interest was made. I was detaching a portion of the adherent crust

* The Modes of Origin of Lowest Organisms, Bastian. Macmillan & Co., London, 1871.

from the vascular structure into which the extravasated blood beneath had been converted by the process of organization, when I exposed a litttle spherical cavity about as big as a pea, containing brown serum, forming a sort of pocket in the living tissues, which, when scraped with the edge of a knife, bled even at the very margin of the cavity. This appearance showed that the deeper portions of the crust itself had been converted into living tissue. For cavities formed during the process of aggregation, like those with clear liquid contents in a Gruyére cheese, occur in the grumous mass, which results from the action of carbolic acid upon blood; and that which I had exposed had evidently been one of these, though its walls were now alive and vascular. Thus the blood which had been acted upon by carbolic acid, though greatly altered in physical characters, and doubtless chemically also, had not been rendered unsuitable for serving as pabulum for the growing elements of new tissue in its vicinity. The knowledge of this fact is of importance; as it shows that should circumstances appear to demand it, we may introduce carbolic acid deeply among the blood extravasated in the limb, confident that all will nevertheless be removed by absorption."

The Professor inclines us to open our eyes widely; for, according to him, we have here, not only a most powerful parasiticide, and we know these septic germs are pretty hard to kill, but one which, while killing these enemies of our race, has the double virtue of causing the absorption of dead bone, or any other such foreign substance lying around loosely; but not only this, for while so very destructive to the amœbæ, vibriones, bacteria, and torulæ, we may inject it fearlessly and deeply into the extravasated tissues of a limb, and rest confident of its absorption. Quite different observations these to those of Dr. S. Weir Mitchell, and other physiological experimenters, who have seen such disastrous results following its injection into some of the lower animals, as to warn us of its too careless use with our patients.

But he has not been content to leave us with the astonishment

of Æsop's Satyr, when he saw the countryman blow hot and cold with the same breath.

In June, 1869, ("Lancet," American edition), the Professor gave the world another paper: "On Ligatures of Arteries on the Antiseptic System," in which, after speaking of the various attempts to improve the ligature or supersede it by other methods, he says: "The antiseptic system, however, places this branch of surgery, like most others, in a new light." In this article he goes on to tell us how to put his system fairly to the the test, he made an experiment of "*ligature of the carotid artery in the calf on the antiseptic system with threads composed of animal tissue*," in which he tied the right carotid with two ligatures, one with peritoneum from the small intestine of an ox twisted into a cord, and the other with fine cat-gut, both of which had been soaked for four hours in a saturated watery solution of carbolic acid. He then goes on to tell us how, from his previous observations upon the effects of carbolic acid in compound fractures which we have quoted, he "anticipated that the ligatures of peritoneum placed upon the calf's carotid would, after the expiration of a month, be found transformed into bands of living tissue."

And, *mirabile dictu*, the miracle looked for is straightway seen. "Such was in truth the case, as was apparent on closer inspection." He says "the two pieces of cat-gut which had been tied round the vessel at that part had become, as it were, fused together into a single fleshy band, inseparably blended with the external coat of the artery." And further on he says, "ample as was the evidence afforded to the naked eye of the organization of these ligatures, it was satisfactory to find it confirmed in the clearest manner by the microscope." *

* * "It appears, then," says he, "that by applying a ligature of animal tissue antiseptically upon an artery, whether tightly or gently, we virtually surround it with a ring of living tissue, and strengthen the vessel where we obstruct it. The surgeon, therefore, may now tie an arterial trunk in its continuity close to a large branch, secure alike against secondary

hæmorrhage and deep-seated suppuration; provided always, that he has so studied the principles of the antiseptic system, and so carefully considered the details of the mode of dressing best adapted to the particular case in hand, that he can feel certain of avoiding putrefaction in the wound. For my own part, I should now, without hesitation, undertake ligature of the innominate, believing that it would prove a very safe procedure."

To all of which we would say: "*Credat Judæus Apella; non ego.*" Verily, verily, great is carbolic acid, and most certainly is Mr. Lister, its prophet!

We scarcely know where to look in the vivid annals of ancient mythology for a parallel to this wonder of the Materia Medica of the nineteenth century. The Caduceus of Mercury is not to be compared to it, for it simply calmed the troubled spirits. The touch of Midas and the philosophers' stone fall far short of it, for their contact with dead bone and effused blood, would only have converted them into gold, and left still behind a foreign substance, though enhancing somewhat its value. The *elixir vitæ* fell far short of it, since it had neither the power to kill nor bring the dead to life, but simply to continue the life of the living. Indeed, we know not where to look for a simile to carbolic acid, with its wonderful power to kill septic germs, cause dead tissues to vanish, or vitalizing them, incorporate them as a part of their living host, unless it be in the "*vril-staff*" of the Ana, as described by the ingenious author of "The Coming Race."*

To conclude in the soberest earnestness, though Mr. Lister's convoy, freighted with septic germs and carbolic acid, launched as it was in the shallowest waters, engendered a popular breeze which has landed its author in the chair of Clinical Surgery in the University of Edinburgh, it requires no prophetic vision to perceive that it needs but a little patience, the waiting a little while longer, to see this argosy of tinsel theories and over-valued goods stranded and wrecked on the shores of professional opinion.

* The Coming Race, passim. Blackwood, Edinboro', and Felt, N. Y.

ART. II.—SOME PECULIARITIES IN THE RELATIONS OF THE SYMPATHETIC AND CEREBRO-SPINAL NERVES, AND DEDUCTIONS THEREFROM. Read before the Dallas County Association, by JOSEPH A. GROVES, M. D., Liberty Hill, Ala. [Published by Request.]

The existence of a ganglion designates a focus, not only for imparting impulse, but also for receiving specific impression. This applies equally to the cerebro-spinal and those placed in the course of a nerve, in which latter case the nerve becomes the medium for transmitting a double impression, viz., to or from the prime source and the interposed ganglion. Although each part of the animal economy possesses within itself the ability to discharge its functions, yet, when severed from the ganglia, which invariably will be found connected with the same, it becomes powerless to execute its office, except by artificial stimuli. And while each ganglion stimulates the functional discharge of parts with which it is connected, it is also found to have sensory connections, without which it becomes inoperative. These sensory connections may originate in close proximity with the parts whose functions they stimulate; or in parts distinct and apparently disconnected, except through the ganglion—again in both. A ganglion, situate upon the track of a motor nerve, would designate it as a focus for exciting muscular action in the tissues to which it is distributed, while the character of the agent imparting the sensory impression to the ganglion which is necessary to its performance of duty, may be as varied as the functions over which the ganglia preside, or the organs with which they are connected. And it accords with the practical teachings of physiology, that the growth and development of any part of the organism necessitates the corresponding growth and development of its associated ganglia, and *vice versa.*

That an active impulse may be transmitted by the sentient nerves toward their periphery, from the centre, is evident from the act of blushing. The phenomenon of erectile tissue, stimulation of the tri-facial producing increased flow of saliva, and

of various sentient and compound nerves, inflammation in the parts to which they are distributed. These also demonstrate that the excitory impulse communicated is accompanied by an increased flow of blood. Thus it is seen, the sensory nerves are agents, not only for transmitting impressions to their central ganglia, but also from the ganglia to their peripheral distributions, increasing or withholding the blood-flow. There is much to induce the belief that the motor nerves reflect impressions to as well as transmit them from the ganglia. The necessity of the nerves transmitting impulse in either direction becomes apparent, when it is considered that the tendency of the nervous impulse is essentially nutritive. The exercise of all the functions of animal life is accompanied by, if not dependent on, or resulting from chemical action. The development of that action, and its resultant heat, is chiefly in the capillaries, and is increased, *pari passu*, as the blood-flow becomes vigorous and unobstructed. In all the manifestations of life, wherever there is a force in action, there will be found a counter or opposing force. Should the function of the cerebrum be suspended, the excitation of the sensory ganglia, through any of their appropriate channels, would only result in such reflex action as the ganglia are in themselves capable of generating; and for the exercise of the will, or intelligent action, the opposite side or lobe of the brain becomes as necessary to receive a counter impression and such impairment of said opposite lobe as to render it incapable of receiving impressions, will cause paralysis on the side opposite to same, as much as the removal of cerebrum destroys perception. Thus, one lobe becoming necessary to the nutrition and integrity of the other, and as the cerebrum is the receptacle for sensory impressions and the exercise of intelligence, in like manner the cerebellum becomes the receptacle and agent for combined and intelligent muscular action, and for emotional development, being a connecting link with the brain and motor track.

The experiments of Matteuci have demonstrated that in muscular action, the proximal extremity or origin of the nerves

exciting the same, is in a different polar condition to their distal extremities, considering the ganglion as the centre for creating and imparting this stimulus to action. The condition imparted from it to all nerves of its distribution, must be chemically and electrically the opposite of its own. The importance of this becomes apparent, when it is considered that should the filaments distributed from the ganglion terminate in or penetrate another ganglion, also a centre for generating vital action, nerve force, or motor impulse, the condition of the latter, and the impulse transmitted from the same, would be the reverse of the former. The perception of sight, smell, sound, etc., are only recognizable through their appropriate organs; yet the impression of each upon their individual ganglia in turn affects the perceptibility of the whole system and activity consequent thereon. There is evidently no direct connection of the optic or olfactive ganglia, whereby the sight or smell of loathsome objects can induce vomiting, or the sight of blood produce fainting—the impression must be transmitted from them to the ganglia controlling the same. The inhalation of the fumes of hydrocyanic acid causes instant arrest of vital action by its influence upon the nervous centre through the olfactery nerves, whereas its gradual introduction induces spasms. Thus, we also find medicinal agents do not always affect different ganglia, and consequently parts controlled by the same similarly, but sometimes severally. So the influence transmitted from a ganglion, regardless of the manner by which the impression may have been received, exciting the same, whether from its own sensory distributions, from its connections with other ganglia, or from medicinal agents introduced into the circulation, will be to excite or suspend the functional activity of its peripheral influence, whether distributed to the secretory organs, muscular tissue, or other ganglia.

In a former paper we alluded to the principle that carbon, when neutralized in combination, had the effect of destroying or suspending perception in the sensorium; and reversely, when largely in excess, as in strychnia, creates an opposite con-

dition or hyperæsthesia. The inference is clearly deducible, that this hyperæsthesia transmitted to the brain, reflects thence the impulse exciting muscular spasm. And we may reasonably conclude that anæsthesia of the brain may result either from withholding sensory impressions, or the direct suppression of functional capacity. The physiological tendency of all functional action is to relieve hyperæsthesia, and is exhaustive of the ability to respond. This applies equally to the faculty of perception and action.

The elimination of phosphorus as the result of mental action or nervous excitement, and the exhausting effects of the same, when excessive, clearly indicates cerebral action to accompany the disintegration of that element, as muscular action does of carbon. Again, as carbon largely in excess tends to create hyperæsthesia of the sensory ganglia, so phosphorus likewise imparts a condition of cerebral hyperæsthesia, exciting action in its dependencies. By the same laws of combination this combustion of carbon and phosphorus leaves an excess of, or releases hydrogen, while nitrogen also is released by the oxygen employed in consuming them. There is every reason to believe that the cerebellum and medulla, with the spinal cord, are especially excited by those released elements in their combination with each other, the hydrogen serving as food for nervous action, to be consumed by the nitrogen in its development, the nitrogen in electro-positive relation serving to impart vitality to the tissues by holding oxygen to be transferred to carbon and phosphorus, itself consuming effete hydrogen, becoming electro-negative and extremely irritant to the spinal chord, exciting muscular action. The effects of effete hydrogen are best seen in ammonia, and of effete nitrogen in hydrocyanic acid and ammonia.

It is very probable that those elements possessing marked medicinal effects on the system do so, either through a special affinity for some component of the body, as of barium for sulphuric acid; or, else through some isomorphic relation with certain constituent elements of the body, as of arsenic and phos-

phorus, in which latter case they either retard or promote the physiological action of those elements with which they are an isomorphous (but this is digressing). In reviewing the anatomy of the nervous system, we find the cerebro-spinal system giving off motor fibres for both voluntary and involuntary muscular action, its integrity being alike necessary for the healthy exercise of both. In the voluntary muscles are always mingled sensory filaments derived from the cerebro-spinal centre, placing them in immediate connection with, and under the direct influence and control of mental perception and emotion. In the nerves supplying the muscles for involuntary action, the motor fibres have interposed ganglia for receiving sensory impressions, and in turn exciting or suppressing muscular action. The period of functional activity in any part being accompanied not only with increased flow of blood, but irritability of its controlling ganglia and medicinal or other agents, exciting such action, must be irritant to its ganglia. Although the proposition, that vital and clinical forces are the same would be too absurd to entertain a moment's consideration, yet I believe it is universally conceded that they are concomitant. And it seems equally evident that the galvanic current, originating alike in chemical action, and upon contact of two unequally heating bodies, finds its counterpart in the nervous impulse. The impressions of heat and cold, though received by the sensory nerves of the skin, and having much in common with that of touch, is certainly a different function, and as such would require separate ganglia, and it is by no means improbable that the large ganglion upon the common root of the tri-facial, and and those upon the posterior roots of the spinal nerves, are intimately connected with the cognizance of temperature, and accordingly regulating the same in the body, through means of their connections with the sympathetic. Some of the filaments of these sensory nerves being distributed to the subjacent muscles and tissues, as well as to the skin, there necessarily exists a direct sympathy between and like action in the superficial and deep parts. And when we consider that fibres, from their

interposed ganglia, are likewise given to the ganglia of the sympathetic chord, which in turn distributes fibres to the arterial tunics and different viscera, also to the parts supplied by the cerebro-spinal nerves, with reversing effect, we find an arrangement for the equalizing and maintaining the temperature of the body. The application of heat or cold being in itself sufficient to suppress or excite nervous perceptibility or action, the first shock of cold is to stimulate capillary and muscular contraction, showing it to be irritant of nervous action, while its effects in diminishing sensibility are not denied. These effects transmitted from the ganglia upon the roots of the sensory nerves to those upon the sympathetic chord, would cause the impulse transmitted from the latter to be an increase of sensibility or hyperæsthesia, with corresponding relaxation of the arteries leading to the hypeæsthetic parts, resulting in increased blood-flow. The effects of the application of warmth upon the cerebro-spinal and sympathetic would be the reverse of what is produced by cold. When to the sensation of temperature there is added the sense of touch, the spinal chord becomes the reflecting ganglion; and if to that pain be added, the brain reflects; and it would appear that every action is the result of a corresponding impression received, thus constituting a habit. This applies not only physically, but psychically.

What applies to the impression of temperature, will also extend to local cutaneous applications affecting the temperature, circulation, or irritability of the parts; also to certain medicinal or toxical agents introduced into circulation, affecting the irritability or sensibility of the spinal chord and its sentient distributions reversely with the sympathetic, the action of semilunar and other interposed sympathetic ganglion, we do not propose to consider.

These deductions accord with the experiments of Bernard and others. The commonly-received opinions among physiologists, that carbonic acid is a stimulus to respiration, finds a partial explanation in the lungs being supplied from both cerebro-spinal and sympathetic ganglia, which antagonize each other, the

sympathetic exciting to action through the effects of carbonic acid producing expiration; and the cerebro-spinal through affinity for oxygen producing inspiration. The affinity for oxygen in the blood, and its transfer to hyperæsthetic tissues, finds its counterpart in the action of nitric oxide.

The same antagonism of function will be observed in the action of the heart, viz., carbonic acid in the right, and oxygen in the left ventricles, simultaneously accompanying, if not stimulating contraction. It is by no means improbable that the lining membranes of the heart and arteries are sentient surfaces for exciting or retarding the flow of blood in strict sympathy with the capillaries to which they are destined. This, together with the physiological necessity for muscular action to animal life, presents a local field for investigation, upon which we do not presume to trespass.

ART. III.—LEAVES FROM THE NOTE-BOOK OF A COUNTRY DOCTOR. By DAN'L BARRY, Purdy, Tenn.

CASE I.—*Excision of a Tumor from the Tongue.*—In 1856, Mr. R., a resident of this county, brought his son to town to be examined for a tumor of the tongue. He consulted two physicians then residing here, and both advised him to let it alone. This, however, did not satisfy the old gentleman, nor the young man either, and I was consulted. On examination, I found a large tumor situated about the centre of the tongue. It had already attained the size of a large hickorynut, and greatly impeded the boy's speech and degulition. He informed me that it was growing very fast, and he feared that it would soon, as he expressed it, choke him to death. In this view of the case, I did not hesitate to recommend its excision, to which both father and son consented. I explained to both the danger from hæmorrhage, but they were still not only willing, but anxious that I should operate. I obtained the assistance of Dr. W. C. Kindel, of this place, and proceeded to operate at once.

The boy protruded his tongue and held it steady himself, but would not allow me to run a thread through to steady it with. I then made a longitudinal incision on the upper surface of the tumor, and dissected it from its bed, by slow and cautious strokes of the scalpel, using the sponge frequently, so that I might see and avoid arteries as much as possible. He did not lose an ounce of blood altogether, until just at the conclusion of the operation, indeed, with the very last stroke of the knife, an artery of considerable size, which seemed to feed the tumor, was divided. We succeeded, however, in arresting the hæmorrhage with but little difficulty for the time; but in about three hours it commenced afresh, and was actually terrific, resisting all our efforts, and reducing the youth to a very dangerous condition; when, at last, as a dernier resort, Dr. Kindel made a clamp, something after the fashion of the new spring clothes pin, and in this rude instrument we clasped the patient's tongue, and kept it for about twenty-four hours, completely arresting the hæmorrhage and saving his life. He (the patient) is still living, and is now a practitioner of medicine. Whether this operation made a doctor of him, or not, I cannot say.

CASE II.—*Shoulder Presentation of a Fœtus Evisceration—Delivery.*—August, 1869.—Was requested to visit Mrs. W., residing two and a half miles from town, in labor with her first child. On questioning the husband, who came for me, found that Dr. D., of this place, was in attendance, but that something was wrong. On arriving at the house, Dr. D. informed me that she was attacked with pains early in the morning, and that he had reached the house about 9 or 10 o'clock. On examination, he found the os uteri high up, and could feel, as he thought, the head of the child through the wall of the womb. He contented himself with this examination until about 12 o'clock, (the pains being regular), when the lady herself told him something was wrong, and he had better see to it. On examining her this time, he found an arm protruding from the vulva. He thereupon made some effort to turn the child, but being unsuccessful, sent for me. After obtaining this informa-

tion from the Doctor, I approached the bedside. The patient, in the absence of pains, had rather a cheerful expression—was not depressed, though fully conscious of being in a critical condition. Pulse full and regular; skin soft and natural; no evidence of febrile excitement; pains regular and steady. Examination per vagina revealed the right hand and arm of the child protruding from the vagina, and the body firmly and immovably impacted in the pelvis of the mother.

I first made an effort at cephalic version. Failing in this, I endeavored to reach and grasp the feet, and turn and deliver; but although I succeeded, after a good deal of difficulty, in seizing the feet, I could not move the child. After using all the force that I considered justifiable, I desisted, and informed the patient and friends that evisceration was the last and only hope in the case, to which, as a matter of course, they gave a ready assent. I then sent a messenger for Dr. W. C. Kindel, whose presence and assistance I desired. When he reached the house, at his solicitation, I consented that he might try to turn the child, but I felt confident that he would, as the result proved, fail. After he was satisfied of the inutility of any further effort in this way, we proceeded with the operation, which I performed in the usual way, first amputating the arm at the shoulder, as I could not get it out of my way in any other manner. After the operation and delivery, the lady's recovery was rapid and complete, and without a single untoward circumstance. She has since aborted twice, once about the sixth month, and the last time about the eighth month.

CASE III.—*Spontaneous Inversion of the Uterus.—Recovery.* On the morning of the first of October last, I was called to Mrs. Y., in labor with her second child. Reaching the house, found the patient having regular expulsive pains, and the child was born in little more than half an hour after my arrival.

After severing the umbilical cord and having the child removed, I waited, as I usually do, for the recurrence of the pains before making any effort to deliver the placenta. In about twenty minutes she commenced complaining of a very

severe pain in her back, and in a moment more she gave evidence of an expulsive pain, far more severe than any she had experienced in giving birth to the child. Indeed, the agonized expression of her countenance startled me to such a degree that I immediately placed my hand at the vulva, expecting, of course, to receive the placenta; when, what was my surprise to find an inverted uterus, with the after-birth adherent, protruding from the vulva.

I immediately made an effort in the usual way to return it to its normal position without detaching the placenta. Finding, however, that I could not succeed, I decided, with a full knowledge of the risk I would run, to detach it. I did so, and the resulting hæmorrhage fully justified the previous dread I had of this procedure. After detaching the placenta, I attempted in the usual manner to reduce the inversion. (The inversion was complete). I had succeeded in getting it about half way back, when the os grasped the tumor, and contracted so strongly as to render it immovable. Here was a dilemma. The inverted portion immovably held by the contraction of the os, and a frightful hæmorrhage going on all the time.

There was nothing for it but to wait with what patience I could, with the strong probability of seeing my patient die, without being able to render her the least assistance in any way.

After waiting for a few minutes, which seemed hours almost, I discovered signs of approaching syncope. I immediately ordered an attendant to give her a strong toddy, which was the only stimulant at hand, with forty drops of the fluid extract of ergot in it, and I seized this favorable moment for a renewed effort, which was, to my great satisfaction, entirely successful, the inverted organ returning to its normal condition, with a sudden jerk, like an inverted ball of india rubber. Believing that it was the necessary manipulation of the organ in my first effort to reduce the inversion, which caused the powerful contraction of the os, I decided in my last effort to try a different plan; and should I have a similar case at any time, I am so well satisfied with my last plan that I shall try it first. It was

as follows: I placed my left hand on the patient's abdomen above the pelvis, and making a cone with the fingers of the right hand, with their points I inducted the fundus and gradually forced it upward. As the uterus receded, elongating the vagina, I kept my hand steady and followed it up, until, before my effort was completely successful, I distinctly felt at least half of my forearm pass through the superior strait. In this way there is no manipulation to cause contraction, and at the same time the introduction of the hand and arm serves to check the hæmorrhage to some extent; and, in my opinion, this is greatly to be preferred to the usual plan of grasping and compressing the inverted uterus to reduce the inversion. In this case, by the time I had restored the displaced organ to its normal position, the ergot commenced to produce contraction of the muscular fibres, and the timely use of the stimulant had brought about partial reäction, and my patient was, to my very great joy, comparatively safe.

Her recovery was rapid and complete, and she is now in as good health as she ever enjoyed, and is the happy mother of a fine, healthy child. (Her first was still-born).

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—REPORT ON INTERNAL URETHROTOMY. By C. H. MASTIN, M. D., Mobile, Ala. [Prepared at the Request of the Medical Association of the State of Alabama.

Mr. President and Gentlemen of the State Medical Association,—In response to the invitation extended to me, to read a paper upon "Internal Urethrotomy," at this session, I accept the task, more in a spirit of compliance, and as a proper acknowledgment of the honor conferred upon me, than with

the hope that I shall be enabled to interest your attention, or offer any new material for your advisement.

Within the past few years, so much has been written on this subject, and so many new and vexed ideas have been advanced, and in many instances well sustained, that very little seems to remain for me beyond a review of the subject, from its early history to its present perfected condition. As briefly as possible I shall run over the subject which has been selected for me, and endeavor to give you the main essential points in relation to this branch of special surgery, indulging in the hope that you will bear with the tedium of a prolix style, and in your generosity draw the veil of charity over the many imperfections with which it will abound.

"William and John Hunter, two surgeons, whose names have been made illustrious by the benefits which they conferred upon the human race, introduced into Pathology that clear and inductive reasoning which had characterized their physiological specutions, thereby calling forth a system of enlightened principles which has thoroughly humanized every branch of the healing art. They taught that Nature was the only safe instructress in pathology and therapeutics, and that it was only by a careful and patient investigation of her laws, in health and in disease, that we were to arrive at a reliable basis upon which to build a successful practice. From the school which these two medical philosophers had created, there went forth many distinguished disciples who, by their writings, lectures, and examples, spread the Hunterian system wide over the world.

"The spark having been struck in the British Isles, it was not long before the investigating mind of Germany was awakened, and France, experimental in her researches, acknowledged the important truths. 'As a result, a careful interpretation of Nature became the rigidly enforced rule.' Medicine, Obstetrics, and Surgery, were marshaled under the Hunterian line of principles; all rash, interfering, or rude methods of treatment were abandoned. The *Vis Medicatrix Naturæ* became the watchword, and *Arte non vi* the reply.

"To this continued subjection of the mind to the careful contemplation of natural causes and effects, we owe the marked improvement which of late years has taken place in every department of our profession. But unfortunately it is a weakness of the human mind to oscillate from one extreme to the other, and so it is we see in the practice of medicine within a very few years past, the practical pendulum has vibrated from the heroic doses of mercury, and the lancet to the infinitesimal nothings of homœopathic globules, or the folly of a supinely expectant treatment.

"In midwifery, where one has been led astray by excessive instrumentation, another has fallen into a helpless acquiescence in avoidable evils, whilst in surgery, where the young and inexperienced have run wild over the glare and brilliancy of a finely-executed operation, with but little care or reflection for the true interests of the patient, another class, with an affected aversion to the knife, have been seduced into a fatal procrastination; and thus it is we see 'the native hue of resolution' nowhere more 'sicklied o'er' than in some of the obstinate forms of urethral stricture.

"How unfortunate it has been for this class of cases that the teachings of that great light of English surgery, Mr. Abernethy, who denounced all violence in catheterism as inconsistent with the main purpose of the remedy—viz., the absorption of the '*materies morbi*,' composing the stricture, should have had a greater effect than he contemplated. A timid, dilatory treatment has been the result, and in too many instances the passive interference of the surgeon has permitted the case to drift on to a fatal termination, thus revealing the melancholy truth—Nature will not, Nature cannot cure organic stricture."

Recognizing this truism, various methods have been adopted in the treatment of this grave affection; but it not being in the scope of the present article for me to write a didactic treatise on urethral stricture, I shall, as a prelude only, refer to the different methods which have been resorted to, prior to the introduction of the more important operation now under considera-

tion—namely, 'Internal Urethrotomy,' or the section of the stricture within the urethra. In referring to the early history of urethral surgery, we find three methods have been in general use for the cure of urethral coärctations.

1st—Dilatation;
2d—Cauterization;
3d—Incision;
(The latter being either internal or external.)

Of these first, or dilatation has, from the remotest period, been most generally—and I may say universally—resorted to; hence, in the long lapse of time it is not to be wondered at that it has been modified, divided, and subdivided into many forms, and being the mildest, so it must be considered the most desirable course of treatment to be employed, whenever the case is such as will admit of a cure by its adoption. Its various modifications all depend upon the use in one form or another of the sound or bougie, and in this connection it may not prove wholly uninteresting to trace briefly the history of the different instruments with which dilatation has been employed for the cure of stricture.

The earliest reliable treatise which has fallen under my observation, is a report made to the Academy of Sciences by Baron Percy, on the 22d of October, 1807, A. D., in which he was pleased to trace the history of the fabrication and use of sounds and bougies. He refers in this report to a little volume published by Alphonso Ferri, in 1550, A. D., in which it is mentioned that Lacuna, years before this date, had acquired not only much honor, but had amassed great riches by having cured one of the Popes and several of the cardinals of Rome of obstinate strictures of the urethra by the employment of bougies which were made by this Alphonso Ferri.

Contemporaneously with him, Christophe de Vega de Salamanque, by the skill with which he used these instruments, and the dexterity of his manipulations, had acquired so much reputation that patients crowded to him from all directions, and poured into his coffers such countless treasures that it was face-

tiously said of him, "Qu'il faisait pisser de l'or ses à malades," thus proving the trite old adage, so well understood, and fully to be appreciated by this unfortunate class of sufferers, "Qu'est l'univers entier a l'homme que ne pert uriner."

Later, we find Jean le Français has established in Italy a factory for the fabrication of bougies, and so great was his success, and so universal their use, that he acquired the surname of *Jean des Bougies.* The composition of his instruments was carefully concealed, and the factory rigorously guarded. Yet, in the course of time, he was induced to sell the secret to Charles IX., but no one ever having, by his instructions, been successful in fabricating an instrument of like value of those made by him, it has been suggested that Jean did not sell the true formula, and his secret is believed to have died with him. After this date, we find various substances being resorted to in the manufacture of these instruments, many of which were secret formulas, and most of them, like that of Jean, held as such; but in general use, like those of the present day, the most universal were wax, cat-gut, leather, and lead. As the subject became more investigated, and surgery more fixed in its principles, it was seen that these materials, within themselves, were not universally to be relied upon in overcoming the "caruncles and carnosities" which the old surgeons believed to be the nature of strictures; among them Alphonso Ferri, Amatus Lusitanus, Andrea Lacuna, Phillipus, Christophe de Vega, and Francisco Diaz, began to call to their aid other methods than simple dilatation. We find them now smearing their bougies with pomades and ointments composed of verdigris, butter of antimony, quick-lime, arsenic, alum, vitriol, etc., either to eat away the morbid material or hasten the absorption of the stricture; they had no fixed opinion as to the true pathological condition of the disease, and, as a consequence, their system was entirely experimental; dilatation failing to relieve organic contractions, they naturally sought some more powerful means as an adjunct to the bougie; chemical reägents were less dangerous, in their opinion, than the knife, and as a sequence

they found their way into general use as aids to dilatation.

Far beyond the sixteenth century we read of metallic catheters in use nearly two thousand years ago, as referred to by Celsus; and some of these instruments made of bronze or copper, used in the early part of the Christian eara, have in recent years been dug up from amid the ruins of Herculaneum and Pompeii, and are now to be seen in the *Muzeo Borbonico* at Naples. They come to us from the misty past, silent, yet eloquent monitors of the diseases once rife in these the buried cities of Campania; they tell us, with the proof, something of the age of Urethral Surgery. Three or four centuries later, we find that bronze and copper have given place to silver, and thence on to the present day, it seems to have remained the favorite metal; although we have evidence that horn and leather were much used in the fabrication of these instruments. Paulus Ægenitæ, who wrote in the seventh century, referring to the Arabian surgeons, states "they used silver catheters," thus proving the very great antiquity of the instrument, and the preference for silver as the metal best adapted for its fabrication. In our day, we use the wax, gum or metal instrument, according to our fancy, or the special end in view, whether it be *permanent*, *continuous*, *rapid*, or *vital* dilatation; all of which methods have had their partisans, and each in its turn received modifications and changes from the gentle introduction of a soft instrument, gradually increased in size, at longer or shorter intervals; or, the progressive method with the sixty numbers of the Beniquè Scale, by which the maximum degree of dilatation can be reached by a flexible metal sound in as many days, to the more violent procedure of Mayo, who, with six steel sounds, rapidly increasing in size, distends the urethra by force. These various modifications by which dilatation is effected, have given rise to many kinds of rapid distention of urethral coärctations, comprised from first to last, in the 'Hydraulic Method' of Mr. Arnott—the forced injection of oil, as advocated and used by Sœmmering, Despiney, Citadini, and Amussat—more recently the sliding tubes of Wakely,

the expansion or *divulsion* of Perrève, modified by Barnard Holt, and styled by him his "*immediate treatment by rupture*," or the gentler plan of 'over-distension,' used by Dr. Richardson, of Dublin—but more especially by Sir Henry Thompson, of London—have each and all had their admirers. In this very fact the greatest proof exists, if such is wanted, that the process of dilatation, whether simple or modified, is not a universal or complete remedy for stricture; for it is notoriously true that the highest authorities have been constantly at work upon new methods and complicated machines to supply its deficiencies. Even the ancient surgeons, failing in their treatment with the bougie, we discover them seeking "aids to dilatation." Alphonso Ferri, Lusitanus, and Lacuna, as we have shown, had recourse to escharotics and caustics to eat away the 'caruncles and carnosities' which obstructed the passage of the bougie destined to stretch open the narrow place, and thus cure the stricture. As far back as 1603, A. D., it is recorded that Jean Baptiste, Loyseau, of Bordeaux, cauterized the urethra of Henry IV., with savine ointment, successfully to the introduction of a bougie, by which the royal patient was cured, and Loyseau, with a munificent fee, created "Surgeon in Ordinary" to his Majesty.*

Richard Wiseman, in the seventeenth century, revolutionized the treatment of stricture with his bougie armed with caustic potash, and in the eighteenth century, Dionis, in his "Cours d'Operations de Chirurgie," speaks of "desiccative liquors" applied to strictures to soften them, so that the probe would pass and keep open the passage until it 'cicatrize anew.' In the latter end of the same century, we observe the great Hunter calling attention to the use of escharotics as aids to dilatation; and Sir Everard Home, his pupil, going still further, made their use the rule, and simple dilatation the exception. Soon after this, Mr. Whateley introduced into more general use potassa

* Previous to this date, Mayerne, as will be shown, operated upon Henry with the knife. Failing in the operation, he received the censure of the Royal Society of Paris.

fusa, and was followed in France by Ducamp, Lallemand, Segalès, and Leroy de Etiolles; but, like all new ideas, caustics have gradually lost their general favor, and at the present time it would be difficult to say which especial one is most in repute.

This abandonment, as it were, of once a favorite method, is almost a convincing proof of the fact that caustics, within themselves, will not cure urethral stricture. The probability is, the benefit which has been ascribed to them depends more upon allaying, by their peculiar action upon the mucous membrane, the irritation existing in the urethra coïncident with the retrocessment, thus enabling the bougie, or 'port caustique' itself, to do the work by the process of dilatation, than upon any especial virtue within themselves as curative agents. How often do we see a transitory contraction which will not permit the smallest instrument to pass, or the over-distended bladder to pour out its contents, yield to the gentle touch of the mildest caustic, and almost immediately afterwards admit a full-sized sound; here, certainly, no other action took place beyond allaying the irritable condition of the mucous membrane, and lessening the muscular tonicity of the urethra.

Following this, we find searchers after the radical cures resorting to the knife, and the despairing sufferer submitting to all manner of painful and dangerous operations, both within and without the urethra—sometimes with one result, and again without any benefit; so, with it all, we have no positive assurance that strictures have ever been more particularly or permanently cured by one method than by another, and in no part of surgery has greater dogmatism prevailed; perhaps in none is it more unwarrantable than to apply any single kind of treatment as the exclusively appropriate one. Every surgeon who possesses tact, patience, and judgment, with a *requisite experience*, may undoubtedly treat successfully by his own favorite method, it matters not what it may be, the larger majority of cases which apply to him; but his success should not lead him to suppose or try and force the world to believe the plan peculiar to himself the only true one. As a rule, the cure depends

far more upon the skill and judgment of the surgeon in applying it than upon the system selected, or the especial instrument employed. Hence it is we see the partisans of every rival method claim, oftentimes most legitimately, triumphant success; each for his own favorite scheme, whilst others, less justifiably, appear intent only upon bringing to light the failures of others. The exhibition of selected cases proves nothing, as the very operation which may have been successful in the hands of one, may utterly fail in those of another, whilst on the other hand he may have attained equally satisfactory results by an entirely different course of treatment. Hence we draw the deduction—no one method will prove universally successful in every case, or all the varieties of this disease, which a large field of practice produces—for its nature is such, that against it for its cure we cannot possess too many resorts, and we would be unwise to deny to ourselves the right to select, with discrimination, the one most appropriate for a special case from the many remedies before us.

Although a partisan myself to the operation of "Internal Urethrotomy," simply because in my hands it has afforded me better results than any other, I am far from being disposed to decry the various methods which are preferred by others, and which may have afforded them equally satisfactory terminations. Still I am, from a rather extended experience of my own, forced to believe, and I think prepared to prove, that a well-performed "Internal Urethrotomy" will be more satisfactory to the surgeon, and more permanent in its results, than any other known method of treatment. In this opinion I am sustained by that of the first urethral surgeons of the present day.

In approaching this—the subject matter of this paper, viz., the treatment of urethral stricture with the knife—I do so with the knowledge that I am surrounded on either hand by dangers and difficulties which can be appreciated only by those who have paid especial attention to a subject concerning which there has been, of late years, so much angry contention. In order

that he may arrive at any degree of certainty regarding the treatment of stricture by incision, the inquirer must approach the investigation with a mind totally unprejudiced; he must not only investigate the facts which have been established and laid before the Profession; but, above all, he must note the results of his own observation with care and accuracy; for unless he has some experience of his own with which to compare that of others, it will be a hopeless task to come to any rational conclusion himself, or presume to enlighten others. Bedside clinical observations generally prove more accurate teachers than the best-prepared monographs.

As fortuitous circumstances within the past few years have thrown quite a goodly number of cases of this disease under my observation, and, as a consequence, caused me to bestow much attention upon it, it shall be my purpose in this paper—after having briefly adverted to the nature of stricture, its pathological state, and anatomical locality; with reference to the various methods and instruments by which "Internal Urethrotomy" has been performed, and now accepted by the Profession—to give an abstract of my own experience, and describe the steps of the operation which has served the best purpose in my hands. I propose to enumerate the various methods of scarifying and incising strictures, and more especially to call attention to the class of cases in which incision appears to be most applicable. When we come to investigate the subject, it is not surprising that this method should have been put into practice so early in the history of urethral surgery, for we notice in viewing the practice of the earliest writers upon this special subject, they experienced great difficulties in dilating strictures located in certain regions of the urethra. Even when aided by cauterization it oftentimes proved inadequate to the end in view; and as early as 1603, A. D., Mayerne, of France, had operated upon Henry IV. with the knife. Unfortunately for himself he failed in the operation, and was severely censured by the Faculty of Paris, who condemned the procedure in no measured terms; a practical illustration of the fact that success is essential to the

establishment of all great principles. Yet later, as the subject became more understood, and the operation more perfected, we find the Faculty of Paris, in 1852, A. D., awarding the prize of 12,000 francs, instituted by Monsieur le Marquis d'Argenteuil, to be paid annually for the best method of treating urethral stricture, to M. Reybard, whose operation, as accepted by the Commission appointed to investigate the same, consisted of the most fearful urethral sections known to the Profession.

We have mentioned that early in the sixteenth and seventeenth centuries, Diaz, de Vega, and Parè, combined incisions with cauterizations. Chopart speaks of the operation when the stricture "is not too far down in the urethra"; and Allies, in his treatise on the "Urethra," published A. D., 1865, describes an operation in which he cut a coärctation situated in the glans penis. But it is to an American surgeon in 1795 that we owe the credit of being the first man who performed a systematic operation by incision of a stricture located deep in the urethral canal.

Philip Syng Physic, the justly entitled "Father of Surgery in the Western Hemisphere," by his inventive genius, originated the instruments, and performed the operation, which, since it has been perfected, has proved of such signal benefit to the human race; and here it is but just to say, rude and imperfect as those instruments were, they are the type upon which the more delicate of modern manufacture have been modeled, being in all their varied forms, composed, in most instances, of simple canulated sounds, with lancet-pointed trocars.

A quarter of a century later, in 1823, Mr. McGhie, of Dumphries, Scotland, brought to the notice of the "Edinburgh Medical and Surgical Journal" this operation, which he claimed as a procedure of his own; although there was a very slight difference in his instruments from those of Dr. Physic; being essentially the same as those invented by him in 1795.

In 1827, Mr. Stafford again brought up the subject, and favorably introduced it to the English Faculty. To him especially is due the prominent advance from this date onward of

"Internal Urethrotomy." His concise treatise on stricture, published in 1833, attracted the notice of the inventive genius of France, and the attention of the Profession generally became interested in the subject. The master minds of Civiale, Mercier, Leroy, Candmont, Maisonneuve, and Vollimere, were directed to this branch of urethral affections, and the result has been, numerous forms of urethratomes devised, and the operation in a great measure perfected, so that it is no longer an addenda to the treatment by dilatation; but an operation *per se* to which dilatation has become, as it were, accessory. Having given an outline of the history of this operation, after a reference to the pathology, and the most usual location of urethral strictures, I will at once proceed to the different methods—at present adopted—and then try and illustrate, by a few cases, the steps of the operation preferred by myself, and show its success as attending those cases which have fallen under my care.

"What is a stricture?" This may be defined as an abnormal organic contraction of some portion of the urethral canal, which contraction may be regarded as permanent or transitory, in reference to its character of duration.

"Permanent Contractions" are due to organic deposits, in or around the walls of the urethra, which have no tendency to disappear by any natural action or function of the body, hence they have been designated as "*Organic* and *Permanent Strictures.*"

"Transitory Contractions" are dependent either upon local vascular inflammation or congestion, causing a temporary narrowing of some part of the canal, giving rise to the term "*Inflammatory or Congestive Stricture,*" or by causing an increased muscular action of the voluntary or involuntary fibres surrounding the urethra, thus producing what is known as "*Spasmodic Stricture.*"*

But as permanent contractions are the only kind which call for the use of the knife, we shall pass over those denominated

* Thompson, Sir Henry.

Transitory, and at the same time avoid the necessity of entering into a classification of strictures; still, it will be necessary for our purpose to notice generally the varieties of form which they assume, and which, for convenience, have been called "*Linear*, *Annular*, *Indurated Annular*, and *Irregular* or *Tortuous*."

The Linear is the same stricture as that form which has been described by Sir Charles Bell as the "Bridle Stricture," and so generally spoken of by urethral writers. Linear strictures are those which obstruct the canal by a thin membranous diaphragm stretched across it, having somewhat the appearance of the pyloric orifice in its reference to the stomach and duodenum with this difference, the opening may be central, or at one or the other sides of the same; the presence of this membranous septum, whether it be oblique in its passage or crescentic in shape, obstructing a segment only of the calibre of the canal, or entirely closing the passage, it matters not which—constitutes that form which is known by the term "*Linear Stricture*"

Those varieties in which the contracted part is a little thicker and broader than the others, and such as give the appearance as if a band or cord were tied around a part or the whole of the calibre of the urethra, are known as "*Annular Strictures.*"

In some cases of confirmed stricture, we observe the induration extends into the tissues around the urethra to the depth of a half to one line. Although it may be limited in extent, upon the surface from before backward, it will be found that the central portion is denser and firmer in consistence, and consequently more contracted; giving, as it were, the appearance of an hour-glass to the coärctation. Most generally the induration is denser at the floor than in the upper segment of the urethra, a fact well worthy to be remembered, as on this account we generally make our incisions directly downward in all operations required for this form of contraction. This we recognize as the "*Indurated Annular*," which probably is one of the most usual contractions we are called upon to relieve by an operation.

But perhaps the most trying cases which present themselves, is that variety known as the "*Irregular* or *Tortuous*," in which the natural rugæ of the urethra seem to have become adhesive and blended together by a sort of fusion, which may extend, in the course of the canal, from a few lines, sometimes to several inches, in which instances the induration extends deep into the sub-mucous or basement membrane; even involving the entire substance of the corpus-spongiosum, giving rise to the most obstinate of all the various forms of stricture, and against which no operation has proved of much avail, save one of the urethral sections, either external or internal.

The elements which enter into the pathological state, constituting stricture, are important, because we are unable to treat any disease upon scientific principles, unless we fully appreciate its true nature. Investigating this, we find the first effect of inflammation upon mucous membranes to be a swelling or thickening, caused by the engorgement of its vessels. Secondly, we see the exudation of an albuminous fluid taking place in the membrane itself, or more especially just below, in the tissue underlying, which may, under some favorable circumstances, become absorbed; but when this morbid action continues for a longer time, plastic material begins to be thrown out, which in time forms an organized fibrous tissue around the canal, binding together the mucous membrane and the sub-mucous layer, infiltrating itself into the meshes of the latter, and not infrequently involving the corpus-spongiosum itself.

This dense formation, peculiar to itself, is that substance which nature throws out for the reparation of injuries. We see it in cicatrices after wounds—and those firm contractile bands, the result of burns—it is that substance which we know and understand as the "Tissue Inondulaere," "Tissue Cicatricial," or as it has been more properly denominated by Jules Guerin, "The Tissue Retractile." By adopting this appellation its effects will be more fully explained, for wherever this substance takes place, we necessarily have more or less retraction, and as a consequence, whenever around cavities, the result

must be retraction or a coärctation of the calibre of the cavity or the canal.

Such, in a very few words, is the received opinion as to the pathological nature of stricture; although it has been asserted by some that false membrane deposited from inflammation upon the mucous coat, a sort of croupy or diphtheretic formation, is the material which thickens and blocks up the canal. Of this we have no reliable assurance that such is ever the case; the negative opinion is fully corroborated by the researches of Alphonse Guerin, of Paris, who, with reference to this point, examined one hundred diseased urethras in the dead-houses of that city—fifty of which number had strictures—and, to use his own language, "I have never seen the slightest trace of granulating tissue upon the surface of the mucous membrane, or in the spongy tissue of the canal." Further, he says, "In none of the numerous cases which I have examined, have I found any false membrane on the free surface of the mucous membrane." Assuming such to be the true pathological nature of the disease, what must be the treatment? Will stretching or extension, dilatation or absorption, destroy this tissue? Do we resort to stretching machines or extension apparatus to relieve and cure the cicatrices or coärctations incident to wounds or burns? or do we have recourse to the morre rational method of severing the bands? Were we permitted to reason from analogy, we should most unhesitatingly decide upon the latter.

It will not be necessary to go into a close anatomical description of the urethra, but an outline, simply of its form and proportions, will be necessary to illustrate our subject. Its physiological action and the causes producing strictures are irrelevant to the operation, and hence I shall pass them altogether.

The urethra—the canal from the bladder, through which the urine is passed, and the semen ejected—is a tube of some eight and a half to nine inches in length, lined with a tender mucous membrane, into which the orifices of the prostatic sinuses, the ducts of the seminal vesicles, the ducts of Cowper's glands, and the openings of the mucus follicles behind some eighty or ninety

lacunæ or sacks, enter. This mucous membrane overlies a basement tissue, or sub-mucous layer, around which muscular fibres are interlaced, making it a muco-fibrous tube, surrounded with the muscular and erectile tissue of the corpus-spongiosum. It is abundantly supplied with blood vessels, and more especially nourished at the bulba region, by the two arteries which supply the bulb; they enter just behind Cowper's glands, on either side, leaving a space between them of a line to a line and a half, into which, as a space of selection, incisions are made in operations near the bulb, whether they be internal or external sections. The measurements of length and breadth of the canal differ in individuals, scarcely two urethræ agreeing exactly as to dimensions.

In looking over a table of lengths, I find the extreme to be nine, and the shortest seven and a quarter inches, but the deviation from each other in the average was not more than three-eighths to one-fourth of an inch; that is, from eight and one-fourth to eight and five-eighth inches, which gives us an average urethra eight and a half inches in length; this we will divide into its anatomical parts, and show three principal divisions.

The First, or *Spongy Portion*, is the pendulous part of the penis, which extends from the bulb, and which averages six and a half inches.

The Second, or *Membranous*, extends from the bulb to the prostate, lying between the pelvis and the perineum; it is three-quarters of an inch in length.

The Third, or *Prostatic*, extends from the termination of the membranous to the bladder, being entirely within the pelvis, posterior to the triangular ligament, and is one and a quarter inches, thus giving, when taken collectively, six and a half, three-quarters and one and a quarter equals eight and a half inches, the total length.

Now, for convenience of description, the urethra must be divided into *Regions*, wherein we generally find strictures located.

The First Region is at the sub-pubic curvature, or that por-

tion of the canal immediately in the vicinity of the junction of the spongy with the membranous parts, being one inch in front of, and three-quarters of an inch behind the junction, thus including the entire membranous portion with one inch in front, which gives the first region a length of one and three-quarter inches.

The Second Region extends from the anterior limit of the first region to within two and a half inches of the external meatus of the urethra, consequently being in length two and a half to three inches.

The Third Region is from the anterior extremity of the second to the meatus-externus, being a space of two and a half inches, and embracing the fossa navicularis. It will be observed that the prostate is not included in these three regions, and for the reason that there is no authentic case on record, if we accept the two, one mentioned by Ricord, and the other by Leroy, in which a stricture has ever been found in the prostate. Now, the locality in these regions, or the particular region, where we most generally find strictures, will be interesting, as it gives us some guide in forming our opinions as to the nature of the coärctation, and is absolutely necessary when we come to treat the disease. I know of no better plan to furnish this information than to give a sort of synopsis of the observations of the most prominent writers on this point.

John Hunter locates strictures more frequently just in front of the bulb, or in the first region, six inches down the urethra.

Sir Everard Home, in his observation, has found it six and a half to seven inches down the canal, most usually just below the bulb; next in frequency four and a half inches from the meatus.

Sir Benjamin Brodie rarely ever saw it at any other place than just behind the bulb.

Mr. Liston generally found it in the second region, two inches from the meatus-externus.

Mr. Shaw, who made one hundred dissections of persons dead with stricture, never saw it posterior to the bulb.

Sir Charles Bell sustains this statement with the result of his experience.

Benjamin Phillips, in one hundred and seventy-three examinations, noted the large average of strictures to be located five and a half, and none below seven and a half inches down the canal; his statement shows the bulba or first region to be the most usual site.

Civiale, than whom no better or more accurate authority on this subject has ever lived, says the most frequent location is in the following order: First—At the external orifice. Secondly—One of the two extremities of the fossa navicularis. Thirdly—The anterior region of the spongy portion. Fourthly—The junction of the bulba and membranous divisions.

Amussat found it more frequently at the junction of the bulba and membranous portions; and Vidal de Cassis concurs with him in the opinion that this is the locality selected by the disease.

Ducamp said five out of every six cases will be found at four inches nine lines, to five inches three lines from the meatus; whilst Leroy insists that nineteen-twentieths exist at the bulb.

Sir Henry Thompson has more recently given an abstract analysis of two hundred and seventy cases of stricture, in the urethræ of which patients, three hundred and twenty distinct coärctations existed; by close examination he found seventeen per cent. of all these contractions were near the meatus, or just about the fossa.

Professor Gouley, of New York, states that his experience is that thirty per cent. of all the cases which he has seen, were within the region just about the meatus. Although I have seen many coärctations near the external extremity of the canal, still my own observation on firm strictures shows a greater number just in front of the bulb than at any other locality. In the treatment of strictures—failing in dilatation, aided by caustics, and receiving no benefit from divulsion, especially in those cases located in the pendulous portion of the urethra—we have no recourse left us but to resort either to external or internal urethrotomy. As it is not our purpose to refer to ex-

ternal operations, I will pass them by, and describe the latter, which is performed by two procedures; first, by an incision from before backwards, or in the axis of the urethra, from the meatus toward the bladder; second, by scarifications or incisions from the vesical side of the stricture toward the meatus. The first by incisions made upon a conductor; the second by incisions made without a guide. In the first procedure, should the mouth of the stricture be so closed as not to permit the instrument or its guide-rod to pass, we will be forced to operate without a conductor, simply by passing a lancetted urethrotome down to the face of the coärctation, and pushing forward the blade, endeavor to follow the urethra in its anatomical axis. This was the operation of Physic and Stafford, and of surgeons who followed in their path; but it matters not how accurate the knowledge of anatomy, or dexterous the touch of the surgeon may be, we have no certainty this operation can prove a safe or reliable one, for the least deviation from the course of the urethra must result in opening the wall of the canal, and either a consequent hæmorrhage or urinal infiltration follows. Such an operation I consider extremely hazardous, and for myself would greatly prefer to cut down upon the site of the stricture, and make the operation of external urethrotomy, as one infinitely safer; but where the operation can be done upon or with a guide, it becomes, in the hands of a dexterous operator, almost an absolutely safe and sure operation; all which is required being to dilate the contraction sufficiently large to admit the conducting bougie, or the fixed beak of the urethrotome; and follow this up with the blade of the same; thus completing in a moment and safely an operation otherwise performed a most dangerous one. Assuming, then, the operation to be performed with or upon a guide, it will be well, in a few words, to describe the same. The essential part of this operation is to pass a small conducting rod or bougie into the urethra, through the stricture, and on into the bladder; upon this as a guide, the blade is made to follow. Of these instruments, Civiale used a cutting-blade, to which was attached a directing probe, which

was concealed in a canula, the end being pushed into the contraction, by gentle pressure and motion, it passes through the stricture, the blade follows and incises the contraction. Following him, Reybard had his urethrotome, which was to be used d'avant en arrière, or from before backwards; it was a complex arrangement of canules, following a short gum bougie as a conductor, and with a blade which cut laterally into the urethra; a complicated union of dilators, guide-rods, blades, etc., which did not give general satisfaction, and soon fell into disuse.

Bonnet, of Lyons, introduced a modification of this instrument, which consists of a soft silver bougie, with a probe point, which can be passed through the stricture, and give conduct to a blade like that of Reybard. These instruments all served a very good purpose for the pendulous portion of the urethra, but would not answer for the curved. Ricord, Leroy, and Amussat, with a host of others, invented and brought into use their special instruments, against all of which, more or less objection obtains.

More recently another instrument has been brought before the Profession by a surgeon of eminence in France, M. Maisonneuve, which, in its modified form, is probably the best ever devised. It consists of a No. 1 deeply-grooved sound, about twelve inches in length, with a ring near the distal extremity for a handle; to the vesical end is screwed a very fine filiform conducting bougie; a triangular blade attached to a stem somewhat longer than the sound; the apex of the triangle is blunted so as to prevent injury to the sound mucous membrane, with two slots at the edge of the base of the blade, which serve to confine it in the groove of the sound when in use.

The steps of the operation are extremely simple. The bougie is passed through the stricture, and its distal end screwed to the vesical end of the sound; the sound is now pushed through the stricture squarely, and the bougie coiled up in the bladder; the blade being entered into the groove, it is pushed through the contraction at one sweep, and the instrument gently removed from the canal. These are the points of the ope-

ration, but there are objections, both to the instrument and the operation; the sound mucous membrane may be injured in its entire length; then there is no certainty that the small bougie has passed the stricture and become coiled up in the bladder; it may have entered a false route, and traveled along in the tissue by the side of the bladder or rectum; being little larger than a thread, it may have bent upon itself against the stricture, and become coiled in the urethra, or even return by the side of the staff to the meatus, and be cut by the passage of the blade. Such an accident has more than once happened. To obviate these objections, M. Voillimere has added a blunt blade, which glides along with the knife until the face of the stricture is reached, and then being retracted, the blade is pushed through the contraction, (fig. 1).

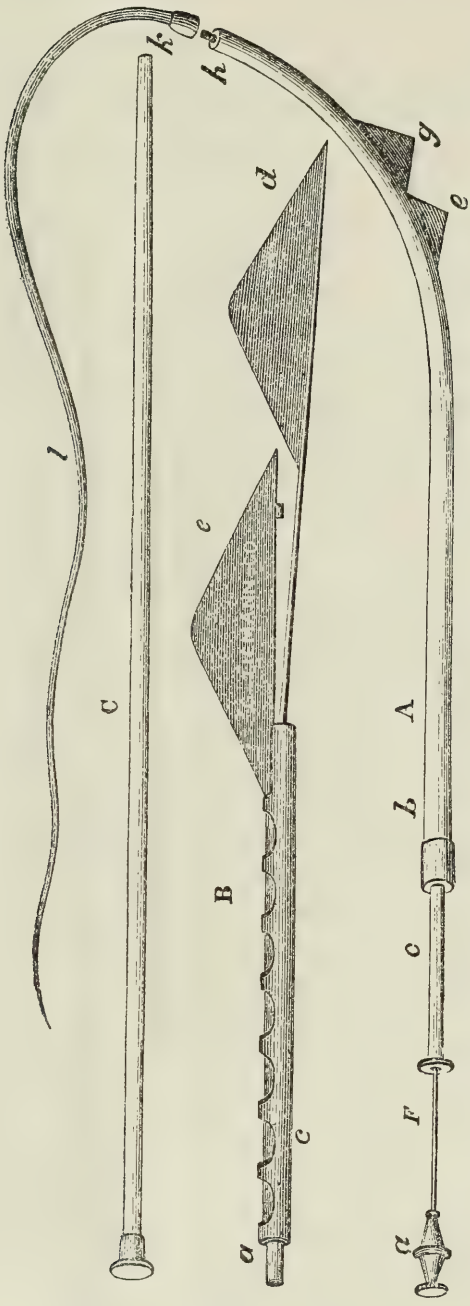

Fig. 1.

This offers no particular advantage, and seems only to complicate matters, as the chief objection is the difficulty of getting the bougie through a long, tortuous contraction. He has rather complicated the apparatus, and made it more difficult to use.

The retrograde operation, or the one from the vesical edge of the stricture forward, is generally had recourse to after the stricture has been sufficiently dilated to admit the oval end or ball of Civiale's instrument, (fig. 2) which is passed by half an inch beyond the stricture, the blade sprung, and as it is drawn out, cuts the stricture from behind forward. Civiale's rule was to cut half an inch on either side of the coärctation, so as to

insure the cutting of all fibres or bands which possibly might extend beyond the free edges of the stricture.

Fig. 2.

Other instruments, combining other methods, have been devised, so that without removing the urethrotome, after the incision has been made from before backwards, the blade can be sprung and the instrument converted into a retrograde urethrotome. Such an instrument, and a most valuable one it is, has been invented by the ingenious Charrière, (fig. 3) which has had the further improvement added of the conducting bougie of Maisonneuve. Or the simple contrivance of M. Trelat, (fig. 4) which performs all the sections, both anterior and posterior, simply by reversed movements of the blade-rod, will be found a most useful addenda to the armamentarium of the urethrotomist.

With the hope that gentle scarifications over the stricture in the line of its edges would hasten absorption, and consequently that the use of the bougie would complete the cure by dilatation, Amussat, Dzondi, Ricord, Begin, and Roberts suggested, and had made, numberless scarificators to cut small incisions into the stricture, so as to get up suppuration sufficient to remove the coärctation. Failing in this purpose, the operation has fallen into disuse, and is no longer accounted among the operations for the cure of stricture. Going from one extreme to another, Dr. James Arnott proposed as an operation "excision" or "resection" of the stricture, in which he would advise, with an instrument on the order of a trephine, that the stricture should be rasped or cut out. The idea was accepted and advocated by Mr. Benj. Phillips and Leroy d'Etiolles, but it has fallen into its merited oblivion. We now come to the last of the retrograde operations—that of M. Reybard. He started out in the belief that strictures could not be relieved or cured by dilatation. He regarded the use of bougies or sounds as only subservient to operation by the knife. His operation can be described in a few words, and consisted in dilating the urethra until it would receive an instrument of No. 9 or 10 English measure. This being accomplished, he passes his ure-

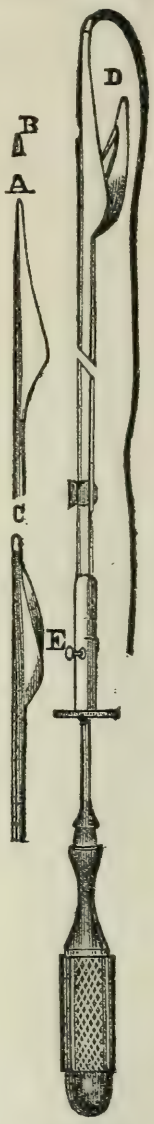

Fig. 3.

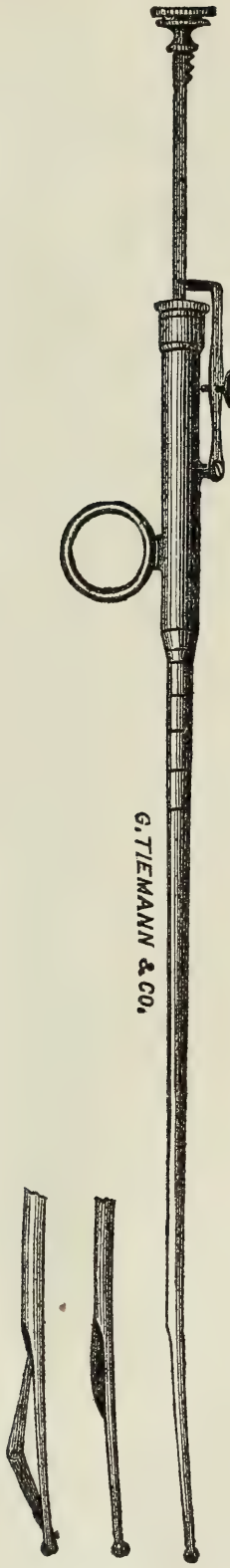

Fig. 4.

throtome, which, by an ingenious mechanism, is so constructed that two blades separate and stretch the mucous membrane forcibly, and between them a long blade passes and cuts the entire stricture, with at least an inch on either side—deeply, almost through the canal itself; and instances are recorded in which the operation was as extensive as an external incision, the blade actually appearing through the integuments. The after-treatment consists in the retained sound, and then the passage of a dilating instrument for 30 or 40 days at least twice each day, so that the wound is prevented from cicatrizing, and to permit or force the same, to heal by granulations, thus insuring a long "intermediate cicatrix," or "splice" to fill up the wound, and thus, by this piece let into the side of the canal, permanently enlarge the same. The operation was a frightful one, yet he reports successes to a remarkable degree. It has not received the universal sanction of the Profession, although the Commission awarded him the Argenteuil prize of 12,000 francs.

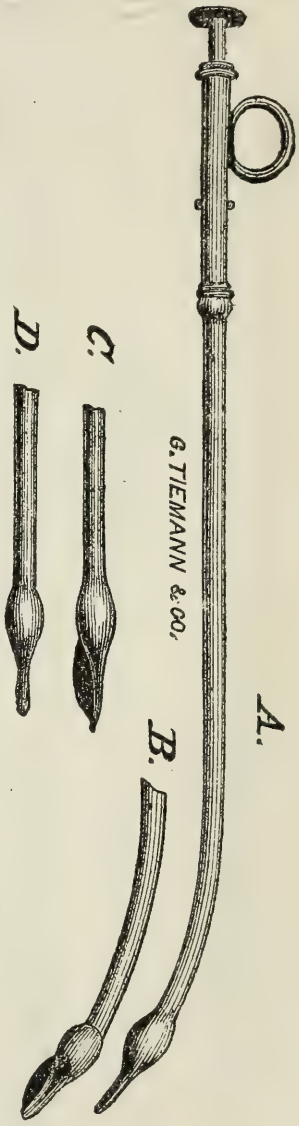

Fig. 5.

In America, where this operation is beginning to become a favorite method of interference for stricture, many valuable instruments have been devised and admitted into very general use among the surgeons of our large cities. That of Dr. S. D. Gross, (fig. 5) whose name stands deservedly high among the most distinguished

surgeons in this department of the Profession, is constructed after the plan of the old Stafford instrument, with the difference that the blade is guided by a short beak, which enters the mouth of the stricture, and serves to guide its course. In the hands of a surgeon like its distinguished inventor, it is a useful instrument, but with one not so dexterous, the sides of the canal may be opened. An objection which I find to the direction of the incision is, the blade passes on the concave, instead of the convex side, and, consequently, cuts the stricture in its upper segment, when it is more advisable, for reasons given, to direct our incisions against the floor of the urethra.

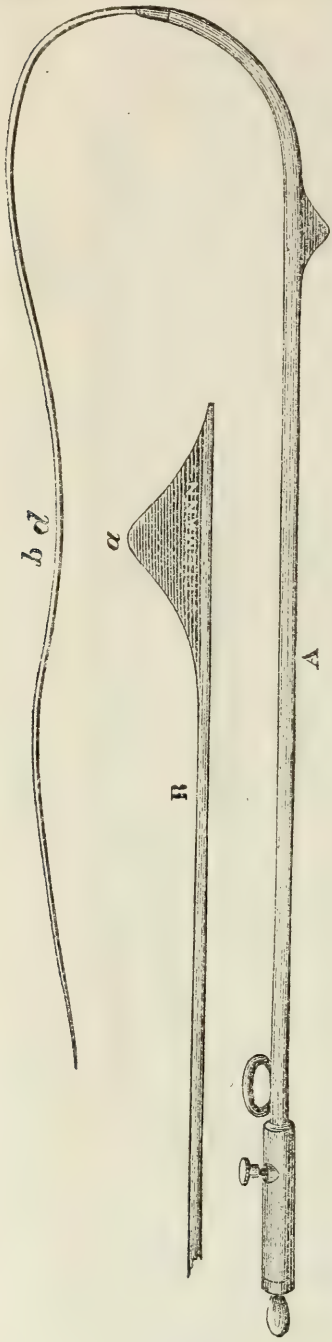

Fig 6.

Prof. Bumstead, New York, has recently introduced a modification of the instrument of Maisonneuve. It is shorter in its curve, and provided with a conducting bougie, like the original; it is a good one, and, with the exception mentioned, essentially the same as the French instrument, (fig. 6.)

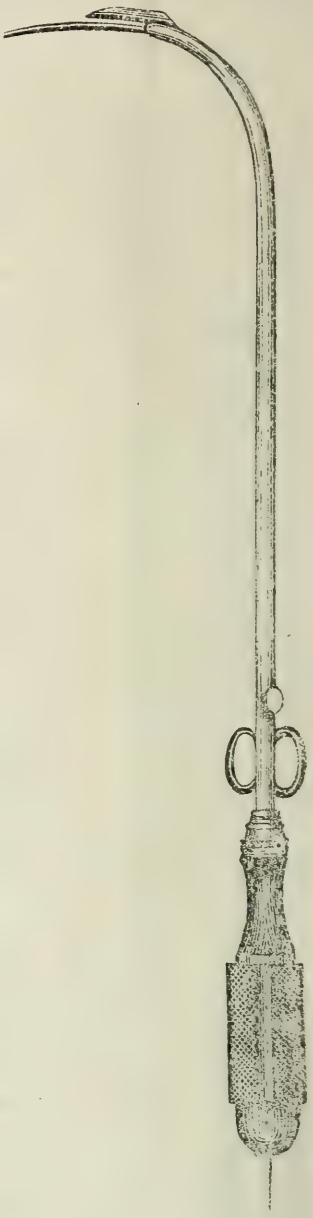
Fig. 7.

Professor Pancoast, of Philadelphia, and Westmoreland, of At-

lanta, Ga., have brought into use, each his own instrument. That of Dr. Pancoast, I should think, was more difficult to use, and better adapted to strictures located far down the canal, (figure 7).

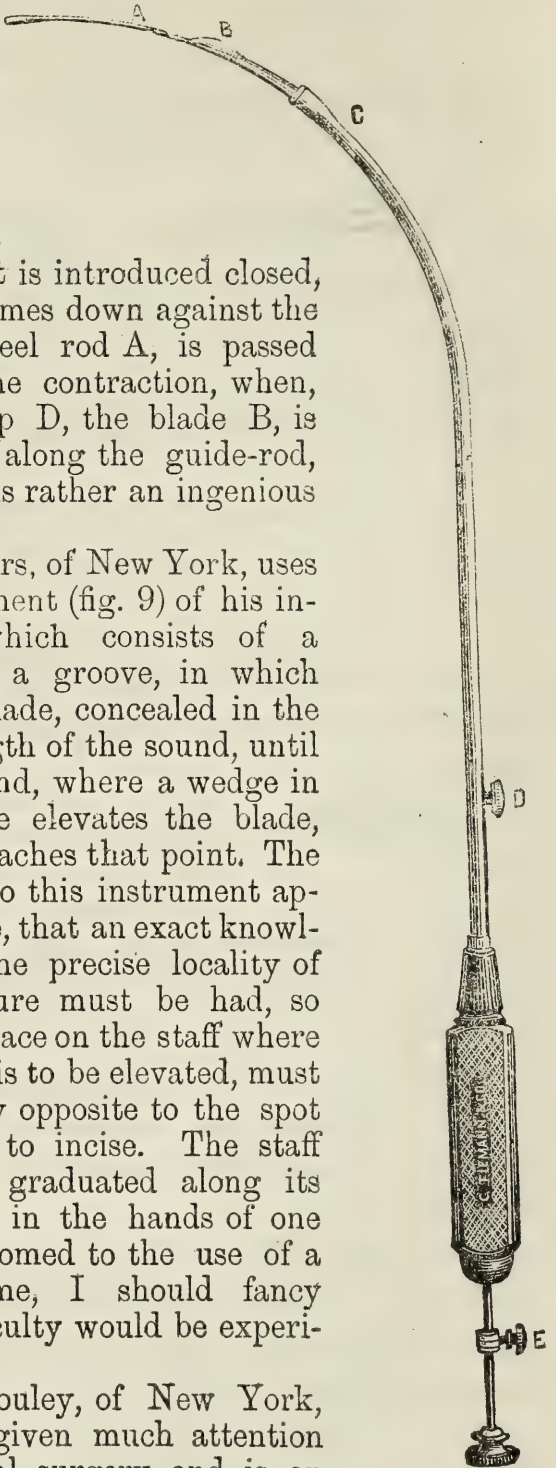

Fig. 8.

Westmoreland's (fig 8.) is so constructed that when it is introduced closed, the end of the canula, C, comes down against the stricture, and the small steel rod A, is passed through the opening in the contraction, when, by a movement of the stop D, the blade B, is protruded and conducted along the guide-rod, through the stricture. It is rather an ingenious and good instrument.

Fig. 9.

Dr. Peters, of New York, uses an instrument (fig. 9) of his invention, which consists of a staff with a groove, in which glides a blade, concealed in the entire length of the sound, until near the end, where a wedge in the groove elevates the blade, when it reaches that point. The objection to this instrument appears to be, that an exact knowledge of the precise locality of the stricture must be had, so that the place on the staff where the blade is to be elevated, must be exactly opposite to the spot we desire to incise. The staff is closely graduated along its sides, yet, in the hands of one not accustomed to the use of a urethrotome, I should fancy some difficulty would be experienced.

Prof. Gouley, of New York, who has given much attention to urethral surgery, and is an advocate of this operation in selected cases, has modified the principle of a French instrument, which may not

inappropriately be called a *bladed sound*, as it consists of a steel sound with a short curve, upon the convex side of which a stationary blade is placed, with a cutting edge directed *toward* the point of the sound, (fig. 10).

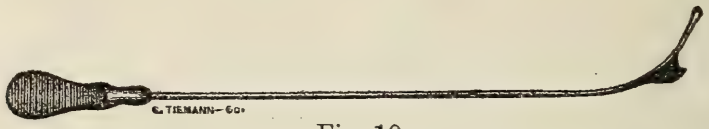

Fig. 10.

Dr. Gouley has added the valuable improvement of canulating the sound, and using as a guide his filiform whalebone bougies, which are passed, after his peculiar method, through the stricture, and the sound glided over them, (fig. 11).

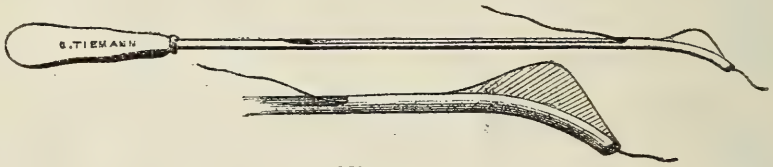

Fig. 11.

An additional improvement of his (fig. 12) consists in placing upon the sound a protecting shield, after the manner of Voillimere, (fig. 1.)

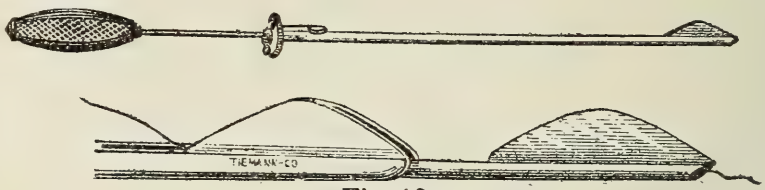

Fig. 12.

Besides these, many other surgeons have invented and brought into use their special urethrotomes, but it would only serve to consume time and space by a reference to them, as they are essentially the same in principle with those which have been described.

But probably the most important operation is the simplest of them all. I allude to opening up the retrocessments at the orifice of the urethra. Strictures located here yield to no treatment save that of incision. We can neither call it internal nor external urethrotomy, for it partakes of the character of both, being external, even though it should extend to the lower limit of the fossa navicularis.

It is easily performed with a probe-pointed bistoury, or more easily with the instrument devised by Civiale for that purpose, his "Urethrotome à Bascule," or "Meatome," (fig. 13).

Fig. 13.

He first proposed this debridement for the purpose of enlarging the mouth of the urethra, preparatory to the passage of his lithotrite in operations for stone. Since the subject of urethral surgery has claimed more generally the attention of the Profession, we see the importance of this little operation, and how easily and readily some of the most obscure affections yield after the section of the meatus.

Two cases which have recently been under my care may prove not uninteresting as illustrative of this fact.

The first was a gentleman from the interior of the State, aged thirty-five, who had been suffering a long time, over eighteen months, from a troublesome urethral discharge, which had obstinately resisted all treatment, save the only one which could possibly have relieved him. He came to Mobile for the purpose of being treated for what he pronounced "an old chronic gonorrhœa," and being on the eve of his nuptials (to use his own classic expression) was "in no good way for anything of that sort." Suspecting a stricture at the sub-pubic curvature, I essayed to examine his urethra, although he positively assured me he could pass a large stream, and that nothing of that nature was the matter. To my astonishment, I was unable to pass the smallest size filiform bougie; the meatus was closed, and the entire fossa navicularis the seat of an active urethritis. I opened the mouth freely with the meatome, plugged it with the wax bougie, which he wore for some twelve hours, and then treated him with a mild astringent injection, which he used morning and night. At the expiration of a week he returned home perfectly well.

The other was a gentleman of this city, who, two summers ago, had been spending the season at Newport. Whilst enjoy-

ing the surf-bath of that delightful resort, he was stung upon the penis by a sea-nettle (*Medusa Æquorea*). The pain was severe, and the consequent irritation and inflammation very great; the integuments enormously distended and œdematous, rendering it necessary for him to remain in his room, confined to bed, for several days. Upon its subsidence he returned home, where, during the past winter, spring, and summer, he enjoyed his accustomed health, noticing nothing unusual in his condition, Some three months past, his attention was attracted to the fact that he was losing, as he expressed it, "his manhood"—in a word, he was impotent. Terrified and alarmed at this condition of affairs, infinitely worse than the sting of all the sea-nettles which swim in the Atlantic ocean, he sought me for consolation. Upon examination, I discovered the meatus, in a great measure, closed by a dense cicatrix, the result of the inflammation and ulceration produced by the nettle. The treatment was apparent. I opened the urethra large enough to admit a No. 40 Béniqué sound, treated it with a retained plug, and then followed up the treatment with the occasional introduction of a sound through the entire length of the urethra—one of the best methods of allaying urethral irritation; and was thus enabled, in less than ten days, to restore my patient, not only to health, but to his domestic happiness.

This operation is, under all circumstances, especially required in those strictures located deep in the canal, which we wish to dilate to a full degree, and which we would find it impossible to accomplish unless the meatus was first incised; and, for obvious reasons, being the smallest portion of the tube, a full size sound could not be introduced, unless the meatus had first been opened.

The objections which I mentioned as pertaining to the Maisonneuve and Voillimere's instruments, induced me to have constructed a urethrotome which, in my hands, has proved satisfactory; so far, it has answered my most sanguine expectations, and I believe it will prove a valuable modification, particularly in those cases where the stricture is located at or just in front

of the bulb. Those located in the pendulous portion can be easily operated on with almost any instrument, and as the most simple, the probe-pointed knife and grooved director of Sir James Ferguson, of London, is especially adapted to them. But at the bulb and curved portion of the urethra a regular instrument is more desirable; and, with this end in view, I have combined the 'small, probe-pointed silver catheter' of Sir Henry Thompson with the triangular blade of Maisonneuve, *guarded* by a *fixed shield*, (fig. 14).

Fig. 14.

Thompson's catheter is as follows: A small No. 1 English scale, at the point, which gradually increases in size to a No. 2 at the distal extremity. The eye E, of the catheter, is on the concave side, and is two and a half inches from the end of the probe, which is *less* in size than a No. 1 bougie; and being small, smooth, and rather firm, although flexible, can be passed by careful manipulation through almost any stricture. My shield is fixed upon the convex side of the catheter, and just two inches from the eye of the instrument, which is on the concave side. Now, supposing a stricture just in front of the bulb, the most usual place; it is six and a half inches from the meatus; and as the wedge point of the shield C, is just two inches from the eye of the catheter, we can at once see when the small silver probe has been gently insinuated through the stricture, and on into the bladder, that with the addition of the two inches between the eye and the shield, when the shield comes down fairly and squarely against the stricture, that the two inches of the catheter from the shield to the eye, must occupy the space made up by the three-fourths of an inch in the membranous portion, and the one and a quarter inches of the prostate, which gives the two inches, which, added to the six and a half inches of the pendulous point, makes up the total length of the urethra to eight and a half inches; and we know the eye E, of the catheter, is within the vesical cavity. Now, by withdrawing the catheter rod B, which works like a piston to a syringe, and we have a drop of urine follow, which clearly shows the instrument is within the bladder. We have now only to push on the blade-rod A, which is graduated along the stem, and the blade D, is directed

along the groove through the coärctation, the stricture cut, and the instrument removed.

ILLUSTRATION OF MY PROCEEDING.

Better to illustrate the method which has given the most satisfaction to me, I will suppose a case in which, by the exploration with a 'bougie à boulé,' or ball-pointed bougie, (fig. 15) we find, for convenience, a firm stricture just in front of the

Fig. 15.

bulb—I here speak of a firm stricture—such as will require the section by the urethrotome. We then select a small bougie, less than the size of the stream of urine which he is able to pass, and gently introducing it through the stricture, gradually in the course of three or four days, by increasing the size of the bougie, we open the coärctation large enough to admit the small probe of the "catheter urethrotome," and passing this on into the bladder, the shield reaches the anterior face of the stricture; and having satisfied ourself that the point of the catheter is within the bladder, which will be proved by a drop of urine appearing after the withdrawal of the mandrin, and that it is not in a false passage, we have only to turn the stop screw, push on the blade, and the stricture is cut.

It will now be necessary to examine and see whether a fold of membrane at the posterior edge of the stricture has not been left, which we tell by the introduction of the 'bougie à boulé,' and gently withdrawing it; if it is caught on the edge of the ball, we select a No. 1 retrograde urethrotome of Civiale, (fig. 2) and pass it about half an inch beyond the posterior edge of the stricture, the blade being sprung, and an incision made through the undivided parts, and in a line with the incision made by the urethrotome, from before backwards, until it has reached a point from one-half to three-quarters of an inch be-

yond the anterior edge of the stricture. This section will admit, in an ordinary-sized urethra, about a No. 40 Béniqué sound, (fig. 16) which is equal in size to a No. 20 of the ordinary French scale, or a No. 11 of the English gauge. This being gently passed, we gradually increase the size up to a No. 44 or 46, which equals a No. 12 to 13 English catheter. This is as full as, under ordinary circumstances, one would desire to carry distension.

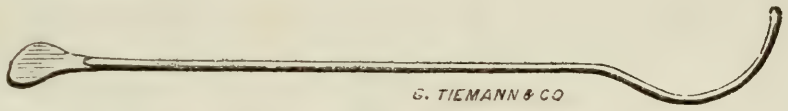

Fig. 16.

We now pass a No. 12 English gum catheter, draw off the urine, and leave it as a retained sound for twenty-four hours; longer than this I do not deem it necessary—it serves to prevent the urine coming in contact with the incision, and permits it to glaze over with lymph and become seared. Care should be taken not to plug the catheter—the urine must find a free vent, so that the bladder shall not become filled, and in escaping find its way along the sides of the catheter, and thus come in contact with the wound.

After an operation, I always give a full dose of opium, usually forty to fifty gtt. of McMunn's elixir, with some fifteen to twenty grains of quinine, a hot hip-bath, and absolute rest in bed, which will, in nine out of ten cases, preclude the possibility of a rigor or an attack of urethral fever. The catheter is removed at the expiration of eighteen to twenty-four hours, and on the second or third day I begin with a Béniqué sound, equal in size to the then present calibre of the urethra, and increase it by two or three numbers each day, or every other day, until the maximum point of dilatation possible, in the especial urethra under consideration, has been reached, remembering the fact, *each urethra has its own particular size*, and they vary greatly as to capacity; so that where No. 45 has been reached in one, No. 60 would be required for another. Each day, upon the introduction of the sound, it will be well to drop back one or two sizes, from the point reached at the last day, so as to

avoid any useless stretching. In this manner we gradually dilate the urethra, so that we reach the point which we desire in some eight or ten days; and it is a matter of importance to incise freely the meatus with the meatome, (fig. 13) so that a full-sized sound can reach the strictured point, which cannot be attained unless by this incision, as the anatomical condition of the urethra is such that the meatus is always less in size than the main canal. It is best to make one operation of the whole, and do both the deep urethral section and the debridement of the meatus at the same time. It is rarely ever necessary to go beyond No. 54 of the Béniqué scale, which equals a No. 16 of the English measure.* During the course of dilatation it will be

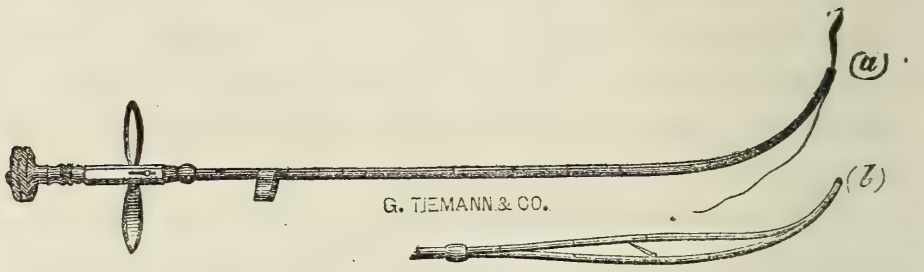

Fig. 17.

well to fortify the patient with small doses of quinine and iron, say from three to four grains of the former, with ten to fifteen gtts. of the tincture of iron, three or four times each day; with rest and quiet after each introduction of the distending bougie, and occasionally a hot hip-bath as an adjuvant, will ward off a rigor, prevent an attack of urethral fever, and hasten the cure.

It should be borne in mind that hip-baths are serviceable only when they are taken just after the use of the instrument, and for a few minutes, not longer than five or ten minutes must the patient remain in; beyond this they congest the pelvic viscera, and do harm rather than good. After the wound in the urethra has fully healed, I furnish the patient with a steel sound, suited to the calibre of his urethra, that is, in size cor-

* In some cases I have resorted to dilatation with Thompson's dilator, after an operation with the urethrotome, but I am not partial to it, as I think it better to harden up the cicatrix by gradual dilatation, (fig. 17).

responding to the natural size of his canal, which, of course, is less than the point to which dilatation has been carried.

He is instructed to pass this for a month, three or four times each week, gradually increasing the interval of time, until he uses it once each week, or twice each month. This I do as a precaution against the possibility of a closure of the stricture taking place, for I am free to confess it will again close up in ninety-nine cases out of every one hundred, unless this course is adopted, and I hazard the assertion, without fear of contradiction, that there is no course known to the Profession by which a stricture can be cured against all possibility of a relapse, and that the only hope we have is to use the bougie after the manner described; by this procedure we can keep a patient at a standpoint, from which he will not probably fall back; and by the operation we place him in a position to enjoy life, and with the exception of the little trouble caused by the weekly or monthly introduction of the sound, he knows no difference in his situation, from perfect health. The instruments with which I instruct the patient to supply himself, are steel sounds, plated with silver, having the double curve of Béniqué, and graduated in size from the point to the shank—the shank being two sizes larger than the point. The introduction of this sound becomes very easy for the patient, and it is surprising to see with what dexterity they acquire its use. I have now a patient, recently operated upon for two bad strictures, who was unfortunate in the late war, and lost his right arm; yet, notwithstanding this, he experiences not the least difficulty in introducing his bougie In all the operations with urethrotomes of various kinds which I have performed upon strictures, now over seventy in number, I have never had any trouble of consequence. In one case only have I had any urinal infiltration, and that was a patient with two firm, hard strictures, located, one near the meatus, the other near the middle of the pendulous portion, or in the second region. In passing the blade of the retrograde urethrotome through the stricture, it passed in one spot through the urethra, and at night *he plugged* his

catheter, which caused the urine to pass by the side of the sound, and finding its way through the little cut, a small tumor formed under the integument; the infiltration was very much circumscribed; gentle pressure, with a large open catheter in the urethra, and a moderately firm bandage overcome all difficulties, and in four days not a vestige remained; the catheter was removed, and he passed his urine *per vias naturales*—went through the course of dilatation, and was discharged cured.

In no case have I had any urethral fever, and in a few cases only a decided rigor after an operation. Indeed, in my experience, it has been more generally observed that rigors follow exploratory investigations before oftener than after operations.

And now upon the subject of hæmorrhage! So far, my experience has been most satisfactory upon this point. In one case, from a very slight scarification I had, for a few minutes, a most frightful hæmorrhage, which caused my patient and myself much uneasiness, but by gentle pressure and the application of ice to the perinæum, it soon ceased, and gave no more trouble. He was a gentleman of this city, who had been suffering from stricture for over forty years. As usual in these cases, he had been the victim of both regular and irregular practice; bougies, caustics, and forced catheterism had, on frequent occasions, been resorted to, to relieve him of retention; when he fell into my hands, I found him a wreck—a constitution broken down, and a shattered nervous energy, the result of the absorption of urea. His rest was disturbed by frequent calls to micturate, and he the victim of all the horrors of confirmed stricture, a condition of affairs which renders death preferable to life. Upon examination, having tried every method to gain admission into the bladder, with one finger in the rectum, I found that a firm, tight impassable stricture existed in the first region, and extended from about half an inch in front of the bulb, near to the prostate; a false passage existed, the result of forced catheterism, which extended from the face of the stricture along by the side of the membranous urethra, and emptied into the rectum; in fact, I entered a small bougie into the urethra, and

drew it out, through the rectum. He passed his urine only by drops, and as the passage was a long and tortuous one, and I was unable to effect an entrance with an instrument, I determined to try and open the mouth of the stricture; with this end in view, introduced a scarificator of Ricord, hoping I could just nick, as it were, the space between the mouth of the stricture and the laceration, where the false route left the urethra; with a very slight cut, which I made directly downward, and with all due regard for the position of the bulba arteries, I am convinced I opened one or the other of them, for instantly I encountered a frightful gush of blood, which sorely tried all the calmness and dexterity I possessed to staunch it! As to the cause, I have but one solution to offer, which is, by the previous interference with the instruments in the hands of some one not skilled in their use, the artery must have been pushed aside from its proper locality, and kept so by the deposit of plastic material. Seeing that internal urethrotomy could effect nothing in the case, I determined that I would perform an external section so soon as he should sufficiently recover as to be able to submit to the operation. Being unable to pass anything through the stricture, I was prevented from resorting to the operation of Syme upon his guide-staff, and, as a consequence, nothing remained but for me to adopt the old operation, "la boutonniere;" having passed a full-sized lithotomy staff down to the face of the stricture, I opened the urethra in front of the contraction, upon the point of the staff; I was thus enabled to pass through the opening made, a small grooved probe, which I gradually worked through the stricture on into the bladder, and on this I glided in a narrow tenotome, and incised the stricture; the staff now passed to the bladder, but it could not be made to enter, kept out by the 'bar-like ridge,' (so described by Civiale and Gross), which completely blocked up the entrance; however, with a long probe-pointed bistoury, I freely incised the 'bar,' and passed a No. 12 instrument into the bladder, which was almost filled with fœtid urine; the catheter was retained twenty-four hours, and then removed. On the

second day after the operation, gradual dilatation with the sound of Béniqué was commenced; on the fourth day the external incision was found to be entirely healed, and the Carlesbad suture pins with which the wound had been closed on the day of the operation, removed; the morning of the seventh day found him walking about the city, engaged in his usual avocations. He is now perfectly well, with the exception of having to pass a No. 52 Béniqué sound (equal to No. 15 of our scale) every Sunday morning, which time he will gradually extend to once a month; he experiences no annoyance. Since the month of May, 1869, he has not had the least inconvenience, his general health perfectly restored, only the memory of his past troubles remain.

One other case of hæmorrhage, and the only one which has fallen under my notice, was in an old gentleman of this city, whose stricture was an inflammatory one, and which, experimentally, I had attempted to destroy by Whatley's method, with caustic potash—the slough separated, and an alarming hæmorrhage ensued, partly filling his bladder with a clot; it was easily controlled by forcing in a large catheter, and using external pressure. The greatest trouble was caused in removing the clot, which was accomplished in a few days by breaking it up with a staff, and washing out the bladder with chlorine solutions. He leads comparatively a comfortable life; but I do not consider him cured, and believe he will eventually seek relief from the use of the urethrotome. With these two exceptions, in a large experience, I have never seen a hæmorrhage exceed a table-spoonful follow any one of my operations; and it must be noticed that in one of these cases referred to, it was not the result of an incision, but the sequence of a cauterization.

The next difficulty is urethral fever; my experience has satisfied me that moderate doses of iron and quinine, with the hot hip-bath, will usually ward this off. I am convinced we have more to fear on this score from the shock produced by exploratory examinations with small instruments, than from the operation of urethrotomy.

Pyæmia, which has been spoken of as a concomitant, I have never encountered, and believe, with judicious management, it should not appear as a sequence.

Infiltration of urine should not necessarily occur, and it depends upon the surgeon himself whether or not he shall be troubled with it, a large *open* retained catheter, I believe, will, in ninety-nine out of every one hundred cases, prevent it.

These are the principal points of objection to this operation; but where the surgeon is governed by the Golden Rule, "*arte non vi*," in all operations about the urethra, I am satisfied no untoward symptoms will arise to mar his most sanguine expectations.

In an appreciation of the different methods of cure, Internal Urethrotomy will bear a rigid examination, resulting in its favor, if the statistics are carefully gathered. Its advantages are, that above all other operations, it can be done quickly; no anæsthetic is required, and we accomplish more in a few minutes than could have been done by dilatation or cauterization in as many days or weeks. The incision, when properly made, is clean, smooth, and harmless, becoming speedily seared over with lymph, and with less danger of infiltration or suppuration than in the operation by divulsion.

The separation of the slough, after cauterization, give more danger of hæmorrhage; and the shock which produces urethral fever is less, after a carefully-performed internal section than any other known operation.

Internal section is especially indicated in all cases of stricture in the pendulous portion of the urethra, and especially in those cases located in or near the glans penis; here, from the nature of the stricture, we know they are particularly rebellious to dilatation, and even after free incision, prone to return. No other operation has furnished more satisfactory results; *Dilatation*, *Divulsion*, and *Cauterization*, each leave the urethra with a tendency sooner or later to recontract and narrow down its calibre; so that none of them are entirely free of objections. Hence, we consider it at least the part of sound judgment to select "Inter-

Fig. 18.

nal Urethrotomy" as the one which, upon rational grounds, offers the best chance for success. Although there is no operation for stricture more difficult to perform neatly and completely than this—none which requires more knowledge of the urethra, more skill in the use of the instrument, or tact in the management of the case. Still, there is none which will give more satisfactory results, or which is more apparent to the sufferer who seeks relief. With these views, we recommend and adopt it as the operation which, in the hands of a judicious surgeon, will furnish "Sécurité, Simplicité, Célerité."

ADDENDUM.—In some cases in which I have been unable to pass a guide-rod through the stricture, or in cases complicated with enlargement of the third lobe of the prostate, I have found this instrument, (fig. 18) particularly well adapted, (an invention of my own,) which is nothing more or less than a silver catheter with a short curve, flattened on its sides near the point, with a beak, to guide a blade which is concealed in the catheter—the edge of the blade is directed downward, and when pushed through a stricture, or upon the lobe of the prostate, the incision is made; after which, by unscrewing the cap at the distal end of the catheter, the blade can be withdrawn, and the catheter remaining "in situ," act as a "sonde a demeure," or retained catheter.—*Monograph from the Author.*

ART. II.—MEDICAL NOTES ON ALASKA. By W. T. WYTHE, M. D. [Read before the Sacramento Society for Medical Improvement.]

Having had an opportunity of seeing the southern part of Alaska, I propose giving the Society, this evening, an outline of the topography and climatology of this *terra incognita*, and the diseases dependent thereon.

1. *Topography.*—The country is exceedingly mountainous; everywhere lofty peaks are seen, clad in snow from January to

December; many rise to a great height, as St. Elias, seventeen thousand feet, and the volcano Ilyamni. One mountain chain, identical with the Sierra Nevada and Coast Range of California, extends along the coast, through the Alaskan peninsula and the Aleutian Islands; another chain, the continuation of the Rocky Mountain system, extends across the country to Behring's Strait, and passing under the sea, is said to reäppear in Asia. Between these two mountain chains lies an immense valley, drained by the Youkon, a river nearly as large as the Mississippi, and which Dr. Dall has well described in his work on Alaska. These mountains, with their numerous branching chains and foot-hills, cover the whole country with impassable barriers. Among these mountains lie many valleys, where, during the few days of summer, some vegetation can be seen, and it is here that the natives live; sometimes, however, a glacier will encroach upon the valley, or an avalanche of snow and rocks from the neighboring hills fill it up, or in spring a flood overflow it. In these inhabitable spots there is but little soil; all the vegetation seems to spring up in the peat bogs, which are found everywhere except on the mountains. In these bogs, when sheltered from the winds, many kinds of trees will grow, but they are almost totally worthless. Grass grows very rapidly during the warmer days of summer, and sometimes attains a height of five feet. For agricultural purposes the territory is worthless.

2. *Inhabitants.*—There are four principal tribes in Alaska, each having distinct manners and customs. 1st. The Koloshians, who dwell along the south coast, and are found as far north as Cook's Inlet. They are tall and powerful men, very savage and warlike; during the Russian government they were very troublesome, and even now are the terror of the northwest coast. 2d. The Aleutians, who live on the islands, are short of stature; their almond eyes and peculiar features proclaim their Mongolian origin. They are fishermen, and travel long distances in their skin bydarks or canoes. Among the many facts which prove their Tartar descent, is the remarkable

one that the inhabitants of Attou, the most westerly of the Aleutian Islands, speak a language so nearly like that of the Corrile Islands, on the Asiatic coast, that they need no interpreter btween them. 3d. The Kenaians, who live on the mainland, are tall and powerful men, nearly as white as Europeans. They are hunters, and live by trading. They are peaceful, but not cowardly, as the Alutes are, and are able to defend themselves from the Koloshians. 4th. The Esquimaux are found on the north coast.

All these tribes have different customs and habits, but I have not time to describe them. Many of the Aleutians, who have been partially civilized by the Russians, live in log huts and clothe themselves as white people do; the majority, however, dress in skins, and live in holes which they dig in the grouud and cover with a sort of hut of logs. Civilized and uncivilized, all display great ingenuity in making their houses air-tight; every crevice through which the cold wind could enter is closed, and the walls are lined with moss. In these huts, not more than ten feet long and ten wide, half a dozen people will live; day and night they keep up a large fire, until the heat and odor are more than a white man can endure. The filth of these houses is indescribable. During the Russian administration the natives were obliged to bathe once a week in the steam-bath, which was erected in every village. Uncle Sam's advent put an end to this tyranny, and now each man is free, and remains as dirty as it pleases him. The food consists of fish dried in the sun, and, when they can get it, black bread and tea.

The value of the country may be summed up thus: Its fur-bearing animals are numerous and valuable. There are large and valuable banks of codfish among the islands, and St. Paul and St. George Islands contain fur seals enough to give to the monopoly having possession the control of the market for that article throughout the world. Beyond this, nothing valuable has been found as yet.

3. *Climate.*—The climate of the interior of Alaska is very different from that of the coast. Dr. Aitken, in his article on

Climatology, states that the line dividing the Arctic from the sub-Arctic zone extends from a point on the coast of North America near Sitka across the continent. This is hardly correct. The isothermal line of 45° Fahr. is a very remarkable one. Beginning at a point near Sitka, about ten or fifteen miles from the coast, it takes a northwest direction, and drawing closer to the ocean, or drawing further away, as it is influenced by certain conditions, which I shall speak of further on, keeps this course for about six hundred miles. After running due west for some distance, crossing Cook's Inlet near its mouth, latitude 60° 30′, it turns to the southwest, and passing through the Alaskan Peninsula and the Aleutian Islands for many hundred miles, reaches Attou, latitude 50°. Thus there is the same average temperature at Attou that there is near Cook's Inlet: a difference of latitude of six hundred and thirty miles.

At Kodiak Island, latitude 58° 30′, the lowest temperature observed during the winter of 1868 and '69, was 17° Fahr., and the average for the months of December, January, and February, was about 30° Fahr. At Kenai, but one and a half degrees farther north, the mercury frequently froze, and the average for the three months was somewhere below zero. Along the coast the average temperature is about 40° Fahr. during the year, while on the other side of the mountains it is many degrees lower. The coast is very foggy and damp. The rain-falls are very frequent, and it is subject to very severe storms of wind. At Sitka, it is said that for a number of years past the number of days during the year, when it did not rain or snow, has been thirty-five. In the interior the climate is very cold in winter, and in summer somewhat warmer than on the coast. There is but little rain or fog. Snow falls to a great depth, and I have seen the ground frozen thirteen inches below the surface in midsummer. The cause of this peculiar climate, and of the difference of average temperature on the coast and the interior, is the same that modifies the whole Pacific coast. The Japan current, which brings the warm waters of the southeast shores of Asia, is undoubtedly the principal agent in controlling the

climate of the northwest coast of America. From the Aleutian Islands to Sitka the whole coast is bathed by this "Pacific Gulf Stream." In addition to this current the winds have a share in influencing the climate. Along the coast the prevailing winds are from the southwest, and are decidedly warmer than from any other quarter, having been warmed in passing over the Japan current.

The diseases of the northwest coast are modified by, and in many cases owe their origin to, the peculiar topography of the place and its climate, whether it is that of the coast or interior. In the damp, cold climate along the ocean, where the winds blow the greater portion of the time with great violence directly from the sea, disorders of the respiratory organs are the most frequent. Bronchitis is never absent; catarrh is seen at every change of weather. Sudden changes, when they are severe, often produce a catarrhal fever or influenza, with more or less bronchitis. Pneumonia often occurs, and seemed in sporadic cases to assume a typhoid type. During a few days of unusually warm weather an epidemic of bilious pneumonia made its appearance at Kodiak, attacking about fifty of the natives. The treatment consisted in opening their doors and windows so as to admit air, attention to the police of their houses, and quinine. Rheumatism is very obstinate, and occurs very often, and generally takes the articular form. Tuberculous diseases are very common among both natives and whites, and occur most frequently among the half-breeds. Phthisis pulmonalis runs a fearfully rapid course. Skin diseases are much more frequent than in the interior; eczema, especially, is often seen, but yields readily to treatment. Syphilis, in all its forms, seems to be found everywhere on the coast, and most of all in places where the whites have traded longest; it is slowly but surely killing all the natives of the northwest coast.

In the interior rheumatism and bronchitis seem to be the prevailing diseases. On Cook's Inlet I met with a number of cases of intermittent fever: all occurred on a bluff several hundred feet above the sea, and where the houses were exposed to a

strong breeze directly from the Inlet. These cases were among white people, and might have been contracted elsewhere; but happening after a sea voyage of forty days, and in persons previously in good health, I attributed it to the locality. Scurvy also appears frequently in the interior, caused by lack of vegetables and fresh meat, and faulty hygiene. The long nights of that high latitude, the excessive cold and deep snow, and the lack of antiscorbutics, render it difficult to keep large bodies of men entirely free from it.

The natives are liable to several accidents peculiar to the country. Transverse fractures of the lower portion of the radius often happen. Four cases of this were very similar; all were received in rowing. There was but little deformity or pain; but crepitation was very distinct, and inability to rotate the hand; these were treated with Hamilton's pistol-shaped splint very satisfactorily. The natives very frequently spring their traps on themselves. One trap used in killing foxes makes a terrible wound: three slender steel points barbed penetrating the part for three or four inches, generally the knee-joint and the bones of the leg. These wounds I treated, after removing the spear heads, by enlarging the wound, inserting a tent, and watching the symptoms.

Variola seems never to have reached Alaska. I saw no marks of it, except in one man, who said he had the disease while a prisoner of war during the Crimean struggle.—*Pacific Medical Journal.*

ART. III.—CARBOLIC ACID AS A LOCAL ANÆSTHETIC. By J. H. BILL, M. D., Surgeon in the United States Army.

In the "American Journal of Medical Sciences" (October, 1870), Dr. Bill gives some interesting results of some experiments with carbolic acid as a local anæsthetic. All, he says, who have handled the acid must have noticed the tingling sen-

sation, not unlike that produced by the aconite, in the finger tips, or other parts touched by it, which presently passes into a greater or less anæsthesia. Finding the prick of a pin produced no pain in the part under such circumstances, nor an incision any uneasiness, he covered the radial side of the left forearm, for half an hour, with a cloth soaked in a saturated solution, and then traced a streak over the course of the radial artery with a camel's hair-brush dipped in the acid, liquified in one-twentieth bulk of water, which, after a few minutes was rubbed off, when, with a common scalpel, and unattended with pain, except when nerves distributed to or passing over the muscular fasciæ were pricked or divided, and even then not unbearable, he made an incision along the middle of the streak of about five inches, by which the artery was so exposed that it could have been ligated. "*The incision of the integuments was painless.*" This was about a year ago, and since then he has verified the experiment practically in many minor operations. Buboes and felons may be incised, and abscesses opened without any pain. He uses a three-edged scalpel, and with a slow sawing motion allows the weight of the knife to make the cut. Sometimes, when the incision has been made nearly through the integument, it may be necessary to brush it out with the liquified acid before extending it deeper. He also excised a small tumor by this plan, and also removed a large wooden splinter, which had been thrust through the palmar fascia and lodged under the tendon of the lumbricalis of the first index finger, without any pain, save where a nerve was divided.

Mr. Erasmus Wilson, in the "Journal of Cutaneous Medicine," relates the case of an officer troubled with disease of the glans and prepuce, for the removal of which he applied equal parts of potassa fusa and water, but being unable longer to endure the pain, and there being "reasons why chloroform could not be used," it occurred to him "to attempt to conquer the irritability of the part by means of carbolic acid." By repeated application of the acid the surface was covered with a thick white film of coägulated albumen, when the original caus-

tic was renewed, to the patient's astonishment and my satisfaction, with an almost painless result. The caustic, which a few minutes before was utterly unendurable, could be used now, and with perfect freedom—almost without inconvenience. We followed up our discovery, and left very little of the surface for future operation.

"This anæsthetic property of carbolic acid was not altogether new to me; but I had never before seen its power so strikingly manifested. I have used it often since, and always with the most satisfactory result; and I employ it at present very commonly previously to the application of caustic to lupus and epithelioma. It benumbs the surface, it dulls the excessive sensibility of the superficial nerves, and it thereby permits the caustic action of our remedies, with a great reduction in the amount of pain. It admits, I have no doubt, of more extensive application, and will, I have reason to believe, come into general use for a similar purpose."

Dr. John McDowell, Demonstrator of Anatomy in the St. Louis Medical College, more than two years ago, called the attention of the members of the St. Louis Medical Society to a marked anæsthesia of some duration he had observed in his hands following their immersion in a mixture containing carbolic acid, which he was preparing for the preservation of subjects for anatomical dissection; and Dr. Montgomery, of this city (Medical Archives, page 605, December, 1868), "related the case of a servant girl, who had by accident cut her arm severely. There was free hæmorrhage, and she had *severe* pain. He applied the strong deliquesced acid, which *arrested the pain* and hæmorrhage, and bound up the arm, and to his astonishment, found the wound next morning almost entirely healed, without suppuration."

Since writing the above, I have removed from my finger, by caustics, *preceded* by the application of deliquesced crystalized carbolic acid, *entirely without pain*, a large wart, so sensitive that it was painful to the touch, prior to the application of the acid.—*St. Louis Med. Archiv.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

The Origin of Fat. By V. Subbotin, Kiew.—The question of the mode in which fat originates in the animal economy, and especially whether it is derived from the albuminates, though frequently asked, has never received a perfectly satisfactory reply. Yet it is one that is of equal importance and interest to the physiologist and to the practical physician. In the last part of the "Zeitsschrift für Biologie," an essay appears on this subject from the pen of Dr. Victor Subbotin, of Kiew, in which he gives the principal conclusions at which he has arrived from his experiments that have been published in a more extended form in the Russian language, in which we fear they would have long remained, to English readers at least, unknown. The points he proposed to himself to elucidate were the following: 1st. Does a direct passage of fat take place in the animal organism from the intestinal canal into the adipose tissue? 2d. Do the fats develop within the elements of the adipose tissue? and, if so, do they take origin from the albuminates, the hydro-carbonaceous compounds, or from both of these together? 3d. Does a synthetic development of fat occur in the animal organism in the mode suggested by Khüne? Khüne's hypothesis, we may remark in passing, essentially consists in supposing that, in the production of fat, glycerine, on the one hand, or the fatty acids on the other, are absorbed from the intestines; and the compounds required in each case to make a complete fat are formed in the body at the expense of albumen or albuminous compounds, the fat-cells being the agents by which the union of the two is accomplished. In regard to the first point, he fed a dog with spermaceti, together with other food; and then finding it was well digested and wholly absorbed, sought for it in the adipose tissue of the body generally, but without success. And he feels himself justified in concluding that, so far as regards the carnivora, a direct passage of fat into the adipose tis-

sue does *not* occur. In regard to the second point, a lean hound was fed with meat, carefully freed from fat and palm-oil. After it had fattened, an examination of the fat from various parts of its body showed that a considerable quantity of stearine was present, as usual, though this substance was not contained in the food, and must, consequently, have been developed in the body of the animal itself. In another case, it was fed with meat and soap from which all the olein had been removed by crystalization in alcohol, and which consisted of palmitate and stearate of soda alone. And here, again, when the animal had fattened, which it did in six weeks, its tissues were found to contain abundance of olein, which, he therefore concludes, was produced, in part, at least, from the albuminates; since only in this mode could the persistence of the fats peculiar to certain animals, or even of the ordinary fats present in all animals, be explained. M. Subbotin proceeds to show that the fat of the internal organs is richer in fats that, like stearine and palmatin, are difficult of fusion, whilst that of the subcutaneous adipose tissue is richer in olein; and he attributes this difference to a difference in the conditions affecting the chemical processes concerned (especially the temperature of the parts), which leads to a more perfect conversion of the albuminous compounds into fats in the deeper-lying parts, and a less complete conversion in the more superficial parts of the body. In support of these views, he also adduces the fact that olein preponderates in the fat of the cold-blooded vertebrates; that the more solid fats occur in greater relative proportion in the bodies of animals at the commencement of fattening, when all the processes are in greater activity, than when they have laid down much fat. And, lastly, he refers to pathological conditions. He considers the general results of his own experiments and those of others to afford no evidence that the albuminates undergo conversion into carbo-hydrates before conversion into fats; and, upon the whole, he appears to be opposed to the hypothesis of Khüne, without, however, propounding any theory to supply its place. His experiments are very valuable.—*Lancet.*

Production of Bone from Medulla. By M. Baikow.—An interesting "provisional communication" appears in No. 24 of the "Centralblatt," from the pen of M. Baikow, on the effects of transplantation of medulla. M. Baikow made two series of experiments. In one set, which were thirty-eight in number, the medulla from the femur or tibia of a dog was placed under the skin of the back of another dog; whilst in a second set, twenty-eight in number, the marrow was inserted beneath the skin of the back of the same individual. The first set of experiments all failed; bone was formed in none. In the second set fourteen cases succeeded, *i. e.*, bone was actually formed; whilst in six cases the changes that occurred in the early stages were followed. The remaining eight cases were unsuccessful. In the fourteen successful cases bony masses were found in various stages of development, from the earliest rudiments to complete formation, with Haversian canals, lamellæ, stellate lacunæ, and medullary cavities filled with medulla. Up to the present time, M. Baikow's experiments extend only to the seventy-sixth day. In one case, at the sixty-first day, not only was complete bone present, but fibro-cartilage. The results of examinations showed that the medulla, after transplantation, first passed into the condition of fibrous tissue, from which, by the proliferation of the cellular elements, bone or cartilage was developed. M. Baikow's results are in opposition to those of M. Ollier, but corroborate those of M. Goujon.—*Lancet.*

Treatment of the Sweats of Phthisical Patients. By M. Peter, Paris.—Sweats should be counted among the most annoying symptoms of phthisical patients. They are met with, in the later stages, of very various character: they may indeed be divided into *febrile*, *tuberculous*, and *colliquative* sweats. The first are those which appear on the solution of fever. It is important to recognize them, for if we suppress the febrile attacks by means of quinine, we suppress the sweat also. The colliquative sweats are those which belong to the last period, when the organization succumbs; we can no longer oppose them by drugs.

As to the tuberculous sweats, they might also be called *sleep* sweats, for they occur not only at night, but also during the day when the patient sleeps; they are connected with the general condition which produces (? Ed.) the tubercle, and not with the state of the lung itself. They are, however, mischievous, and it is necessary to combat them, which can be done both by internal and by external remedies. First among the drugs ranks agaric, the long-known properties of which are still contested by many physicians. Mr. Peter prescribes 20, rarely 30, centigrammes at bedtime, as recommended by Trousseau, and the sweats will be suppressed. Unfortunately the efficacy of the remedy diminishes after a certain time, and it becomes necessary to resort to other means, of which there are many well known: acetate of lead and opium, tannin, etc.

But among the external remedies there is one little known, revolutionizing, to which it is important to draw attention. It consists in washing the entire body with vinegar and water. . . . . The first patient so treated (at the Pitié), had cough, vomiting, and, above all, profuse sweats. After the very first lotion, the perspiration diminished perceptibly; after the third night she had no more sweats, and they did not reäppear for more than three weeks. It seems that the results obtained by external medication are far better than those by internal means. *Bull. de Therap.*

On the Use of Raw Meat in Diarrhœa and Dyspepsia. By Robert Druitt, M.R.C.P., etc.—I learned the use of raw meat as a remedy for diarrhœa from the late estimable Professor Trousseau, during a visit paid to his clinique at the Höpital des Enfans Malades in 1851. Since that time I have had abundant opportunities of proving its efficacy, and although I know that it is largely used by some physicians, it may not be unseasonable at the present time to call attention to it, and to encourage its more general use.

Let me begin with a few words on the mode of preparing it. The meat used may be either mutton or beef—say a tit-bit of the loin of mutton, or of the fillet or other tender part of beef.

This must be submitted to a process either of pounding or of scraping, so as to get out the red soft muscular substance as free as possible from all fat and fibre. The muscular substance so prepared forms a soft pink pulp, and even a good-sized piece of raw meat seems to yield wonderfully little by comparison with the parts that are rejected. It must be a pulp, giving no feeling of resistance when squeezed between the fingers.

The modes of administration are many. It may be given by itself, and this way is best in case of young children. Very young infants may suck it from the end of their nurse's finger, and most of them take it greedily enough in this way. Children who are older, say from two to five, may swallow it if dusted over with white sugar. Older persons may take it conveniently if diffused through a little strong beef tea. But there is another way, for which I am indebted to a lady who has made very large use of this remedy in the case of her invalid daughters, and which is known amongst a pretty wide circle as *jellied chop*. This consists in diffusing the meat pulp through a stiff meat jelly, and allowing it to cool in a shape. This is eaten like a spice, and is very nice to any one whose prejudices are not aroused by the notion of rawness. Salt and other condiments may be added at discretion.

The cases in which raw meat has peculiar efficacy are those in which other food passes undigested, and adds to the irritation of the bowels in a state of diarrhœa. It seems to furnish the most efficient kind of nutriment with least inconvenience from bulk or other quality, and to be digested and absorbed with as little fæcal residum as possible. Still, there must be something more about it than this; for the liquid essence of beef will not take its place, neither will cooked meat.

First amongst the cases in which it is useful, may be mentioned any acute cases of infantile diarrhœa, especially the infantile "cholera" of summer. No matter what medicines and what other kind of food may be used, I believe raw meat to be in itself both a remedy for the diarrhœa and a nutriment that may keep the child alive till the disease passes off.

Secondly, in the chronic diarrhœa of children, arising from scanty food, or what comes to the same thing, food which cannot be digested, and which consequently passes the bowels as a foreign offending substance, here the raw meat acts as food and medicine.

In the habitual diarrhœa associated with "marasmus"—that is, with the superficial ulceration of the intestinal mucous membrane, and enlarged mesenteric glands of strumous children—the raw meat, especially in the form of the "jellied chop," is of most especial service. It is curious to see in cases of this sort how absolutely the stomach sometimes refuses to act upon the food put into it, so that meat, milk, &c., may be recognized unaltered in the fæces. It is just in these cases that the raw meat showed itself susceptible of quick digestion in the stomach. The cases which the ancients called *lienteria*, or *intestinorum levitas*, and which were designated in England in the last century "lubricity of the intestines," in which the stomach and bowels are so irritable that they pass on and eject the food before it has had time to be dissolved and absorbed—are equally benefited by the use of raw meat.

Lastly, there are the cases of the obstinate vomiting in pregnancy, whether attended with diarrhœa or not. This is a kind of case in which no remedy is unwelcome or superfluous. I cannot take to myself the credit of suggesting it, for the mother of a young pregnant lady, who was in imminent danger of exhaustion from vomiting, had witnessed the good effects of this food in the case of another daughter, who died of ulceration of the intestines, and gave it of her own accord. But I can bear testimony to the fact that the raw meat was taken readily, and kept down when almost every other food was loathed and vomited, and I consider the patient's safety largely due to it.

There are other cases of atrophy, dyspepsia, and malnutrition, in which I have found it useful. I should like, also, to say a few words on some other uses of meat, cooked as well as raw; but at present I wish mainly to call the attention of my medical brethren to its efficacy in diarrhœa, which may be expected

to be the cause of an abundant mortality of infants during the next few months.—*Med. Times and Gaz.*

On the Beneficial Effects of Combining Tonics with Aperients in Chronic Constipation. By the Rev. David Bell, M.D., C.M., Goode, Yorkshire.—There is, perhaps, no more prevalent affection than chronic constipation of the bowels—nothing from which a large proportion of both sexes suffer more inconveniences and incur greater risk than irregular and slow action of the intestinal canal. Many years ago (when I had the honor to be in practice as a physician), numerous cases came under my care, both in males and females, where the parties found it to be a great discomfort and trial to them. It was a great discomfort because, after a certain period, varying from three to seven and ten days, it was necessary to take an aperient or purgative, which, if taken in sufficient quantity to act upon the bowels, generally overacted, and caused sinking of the system and depression of spirits; and not only this, but the bowels seemed to be so weakened that they could not again act of themselves. The trial was again to undergo the same ordeal, so that it was put off till serious disturbance was threatened. The subject had, perhaps, more interest for me, because I had to deal with it in my own person; and on one occasion I had been—when a medical student, and while working very hard in hospital and dissecting-room, etc.—three weeks without an evacuation from the bowels. I need not say that on that occasion I suffered fearfully, and had a narrow escape from serious disease. Very many cases of persons with constipation for a week came before me, in the course of a lengthened practice, and the subjects were for the most part of the character denoting a want of tone in the entire system. I had an idea, therefore, that it was want of tone in the intestines in particular that caused the constipation, and that a combination of tonic and aperient—the latter subdued in its action by a mild sedative—would be the remedies to meet such cases; and by carrying my principle into practice, I have rarely if ever been disappointed.

In fixing upon an aperient, my attention was turned to the

class that was known to possess also tonic qualities, and Socotrine aloes was experimented with. After a great many trials, and in a variety of cases, I resolved upon the following formula:

℞.—Aloes Socotrin., extracti hyoscyami, aa gr. xii; quinin. disulph. gr. vi; ferri sulph. gr. vi. M. bene ut fiat massa in pilulas xii æquales dividenda.

NOTE.—As Professor Holloway has been unable to prepare this Department, the best substitute practicable has been presented.—ED.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—HYDATIDS COMPLICATING PREMATURE DELIVERY. By THOMAS J. BENNETT, M. D., Smyrna, Tenn.

On January 2d, I was called to visit Mrs. E., aged twenty-five, in labor with her first child; she was attacked with pains about 8 P. M., and delivered of a dead fœtus in one hour. On my arrival, I found from the size of and general appearance of the child, that it had been dead for some time. The lady stated that she had reached her eighth month. The secundines being retained, I attempted to deliver by making gentle traction upon the funis, which pulled away, leaving the placenta within the womb. There being some hæmorrhage, I thought of introducing the hand and clearing the womb of its contents, but found it impracticable. The hæmorrhage not being considerable, I enjoined perfect rest in the recumbent position, satisfied that there was something else in the womb. The next day, at 11 A. M., she passed a mole or hydatid growth weighing about four pounds, which, in all probability, had commenced formation prior to the death of the fœtus. However, in examining different authorities on the subject, mention is made of cases in which, together with the healthy ovum, there forms in the womb a fleshy mass (a mole, as it is popularly called), caus-

ing either the absorption or expulsion of the ovum; these bodies being retained in the womb, producing hæmorrhage to an alarming extent. In miscarriages it is by no means uncommon to see no traces of the embryo, dead, perhaps, and dissolved in the liquor amnii; occasionally we find parts of the embryo only, the head more especially; and it well deserves commemoration, that now and then the embryo dying and disapperring, perhaps in the second month, the secundines are retained and continue to grow till they acquire the bulk of a nine-month gestation. In the case under present consideration, the fœtus must have died about the fifth month of pregnancy, and retained till the eighth month, remaining in the cavity of the womb until labor pains occurred to expel it; but not of the bulk which, from the age of the gestation, we should have anticipated. Dr. Meigs, in his work on Obstetrics, thinks these moles, hydatids, or uterine growths, are not false, but true conceptions, changed afterwards by some diseased action; sometimes entirely destroying the ovum, and by a vital principle communicated through the uterus, the mass continues to grow until the womb, no longer tolerant of its contents, sets up a series of contractions, by which the foreign body is expelled. This woman, at the time I saw her, was pale, anæmic, and dropsical, and had been so for three months previous to her confinement. In fact, she never enjoyed good health. I treated her while single for suppressio mensium; and, no doubt, her physical ill-health was the cause of the death of her child, and the subsequent growth of the secundines.

Dr. Tanner very sensibly remarks, that we are unable to explain many of the curious coïncidences of this kind which are recorded, and though we cannot altogether accept the view which is held by some authorities on this subject, it is nevertheless important to remember that, as disease may mutilate or death destroy the child while still in its mother's womb, every precaution should be taken to maintain the parent's body and mind in a state of health. Facts in this connection are all important, and these are submitted for record.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

ART. I.—CEREBRITIS, CAUSED BY THE INTEMPERATE USE OF MORPHINE AND ALCOHOLIC STIMULANTS, RESULTING IN SOFTENING OF THE BRAIN AND DEATH. Read before the Medical and Surgical Society of Elmore County, Ala. By E. MASON, M. D., Wetumpka, Ala. Published by Request of Society.

One of the saddest duties the physician is often called to perform, is, perhaps, the statement of *facts*. In his intercourse with individuals and families, it is his solemn duty to keep within the secret recesses of his own bosom everything which may come to his knowledge, considered as private or confidential in its character. It should be his constant rule, without exception, to speak of the diseases and affairs of his patrons with the greatest reserve and caution. For there are occasions when the mind must unburthen its inmost thoughts, and the heart pour forth its hidden secrets to some confidential friend, and how often is the physician that friend whose integrity and honor are thus trusted. Fully admitting and appreciating the duty thus hastily sketched, we must not forget and ignore another duty resting upon every physician, which, though not so delicate, is equally binding; that of giving the light of his experience, however meagre it may be, for the benefit of suffering humanity. This is often, as before said, a sad and unpleasant duty, yet it is one that no personal consideration nor delicacy of feeling should cause him to shrink from, especially when its utterance cannot harm the dead, but may prove of great importance by doing good to the living.

No matter what standpoint we may occupy, we behold in every circle of society the demoralizing effects of war, and it is a universally conceded fact, that the recent civil conflict has opened upon us a flood of intemperance and vice, which doubtless will continue to blight our country for many years to come.

To us, as medical men, the habitual indulgence in the soothing effects of opiates, or the more exhilarating influence of spirituous liquors to drown sorrow or excite pleasure, is most interesting, because the habit becomes a disease which requires hygienic and medical treatment.

It is, therefore, with the earnest desire to engage the attention and excite the interest of the Medical Profession, on this important subject, that we proceed to give a brief account of a most interesting (as representative) type of this disease, and yet more sad case.

Let us not, however, forget that it is human to err, for whilst we condemn the baneful habit, we cannot, in charity, withhold our sympathy for the unfortunate victim.

W. O. H., aged forty-two years, bilious temperament (very fine constitution) had led an active life from childhood, and had scarcely known what it was to be sick. In personal appearance, it was often said of him, that he was a model of perfection. He was generous, devoted as a friend; kind-hearted and sociable among his companions. In his social life, he had acquired the habit of regular drinking very early in life, and, as is too often the case, this unfortunate vice gradually, but surely, increased, until at last he deemed it a necessity. About eight years before his death, to the use of stimulating liquors, he added the more baneful practice of taking morphine for its stimulating effect. He informed me that he commenced this habit whilst in the army, when it was difficult to get spirits of any kind, and as a quartermaster, he had access to the medical stores.

He did not become uneasy about his condition until last July, when he made a candid and free confession, and seemed fully to appreciate the terrible precipice over which he hung. He was anxious to know if anything could be done to save him; but when I would mark out a plan of treatment for his relief, he would either express his inability to comply with the directions or would leave me, promising to renew the consultation very soon and try to do better. The same scene was frequently re-enacted, with the same result. I did not question the sincerity

of his desire for relief, nor his belief that he would at some future time make up his mind to submit to treatment, but the "flesh was too weak."

About the 1st of August he commenced complaining of paroxysmal attacks of headache, sometimes attended with vertigo, and dimness of vision was noticed, which gradually became more permanent; slight deafness, with ringing in the ears began to trouble him. His most intimate friends remarked, that he was growing more serious, and loss of memory was perceptible to himself; his brow was usually contracted, and his countenance generally wore an expression of sad thoughtfulness. Nausea and vomiting would frequently trouble him, and his appetite was not good; really cared nothing for food. Early in September he had a severe attack of remittent fever, attended with most obstinate vomiting and bilious purging. The remedies resorted to were calomel, bismuth, opium, and quinine, with blisters. He convalesced in eight or nine days, but continued in a low state of health. I could not get him even now to continue a course of tonic treatment; but he seemed entirely careless and indifferent to his condition.

I could not get from him the amount of morphine he took daily; he only replied, that he thought it was about three or four grains. I could not get him to put out his dose, so that I could judge for myself.

About the middle of October he grew more rapidly worse, with evident symptoms of softening of the brain. Occasional spasms, not very severe, however; some disposition to paralysis, of the lower extremities particularly; difficulty of swallowing, and want of ability to express what he desired; pulse slow and feeble; pupils of the eyes unusually dilated, and vision continuing to fail.

He now seemed indifferent to anything around him, and although constantly absorbed with his own condition, could not be persuaded to submit to any regular treatment.

On the 6th of November he had a very severe spasm, which put him to bed, and after this he failed very rapidly, and he

soon become reduced to the lowest condition of helplessness; general paralysis and almost constant stupor. He became now entirely deaf and blind, and lay almost motionless in bed for several days before his death, which occurred on the —— of November.

I do not consider that this case was submitted to any well-directed course of treatment. When the time came that I could treat him, he had passed to the fatal stage of the disease, and I felt that I could only resort to palliative means. I blistered him, gave mild mercurial purgatives, sustained as best we could with good diet, and controlled the spasms to some degree with bromide of potash and hydrate of chloral. His stomach, however, continued so irritable that he retained very little of anything. Thus passed away a noble, kind-hearted, generous spirit, a victim to a habit which, sooner or later, will carry to the silent grave all who continue to indulge in it.

After carefully estimating the amount of morphine taken by this patient, from every possible source of information, I find for the last *three* (3) years of his life he averaged about eight (8) grains daily; but I could form no estimate of the quantity of spirituous liquors taken.

It would, perhaps, be out of place in this brief medical paper to enter into a discussion of intemperance in alcoholic liquors, but I desire to indulge in a few remarks on the "habit of opium-taking." It has been said that "habit is second nature," but the Duke of Wellington still more forcibly expressed it when he said, "Habit is ten times nature"; and this is more strikingly true in regard to opium-taking.

It is estimated by Dr. Beard, of New York, that there are more than 150,000 opium-eaters in this country, and it is a fact known to druggists all over the land, that there are persons, more or less numerous, who buy their opiates as regularly almost as they purchase food; indeed, the confirmed opium-taker would permit his family to suffer for the necessaries of life to gratify his taste. It is almost the universal opinion of observers that the habitual use of opiates undoubtedly tends to

shorten life, the estimated average life being about forty years. This is the testimony of most travelers of the East, and Dr. Little, of Singapore, arrived at the same conclusion after most careful and extensive inquiries. His deplorable picture of the effects of habitual opium-taking should fill every one who indulges in the habit with alarm for their own safety; "disturbed sleep, watchfulness, giddiness, capricious appetite, white tongue, costiveness, an indescribable oppression about the chest and haziness of the eyes, wasting of the body, muscles lose their tonicity, and the bones are affected with gnawing pains. Then the figure begins to stoop, the gait becomes irregular, the eye begins to sink and grow dim; the whole expression is that of old age." Finally, structural derangements make their appearance, and the victim succumbs, without resistance, under any virulent disease.

Dr. Beard says that, even in the "country where it grows," opium used in excess destroys the constitution. Thus used, it increases thirst, lessens appetite, constipates the bowels, enfeebles the pulse, and exhausts the nervous system. In its last stages its direful effects are seen in the glassy eyes, the sallow features, and the unequal gait."

It is true, that the soothing influence of opium has the power of veiling the memories of care for awhile, and of lessening the poignancy of sorrow for a season; but stupefaction, relaxation, collapse, coma; yes! and death, too, is the inevitable result of the habit when persisted in. "Opio-mania is as truly a disease as dipsomania," and whenever the patient has lost self-control, so that he cannot submit to restrictive treatment at home, he should be sent to an institution provided for such cases. Private and public asylums for inebriates are becoming, every day, more popular, and I earnestly trust that our own State will establish one, not only where the unfortunate inebriate and the afflicted opium-taker may receive proper treatment, but where they may have all the care and comfort of home.

The confirmed opium-taker is unfitted for all the responsible duties of life. It is said that the exhalation of the "Upas"

tree is so poisonous that all animal and vegetable life is immediately destroyed when brought within its influence; so with this terrible habit; it clouds the judgment; it undermines the memory; it incapacitates its victim for the transaction of all important business. And, if we may be permitted to follow him into the sacred family circle, we find him morose, irritable, and, instead of being the light of the household, his very looks wither all the smiles of pleasure and blight all the happiness of the once joyful home.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

VIENNA, AUSTRIA, January, 1872.

Mr. Editor,—The remarkable success attending the treatment of itch in the Austrian army and navy, induces me to give you a short sketch of the methods and therapeutics employed.

The two methods which are the most popular are: First—The use of styrax ointment; and second—that of styrax liniment. The ointment is composed of one part of lard, one of green soap, a half part of the flowers of sulphur, a half part of powdered chalk, and a half part of styrax. The liniment is composed of four parts of styrax and one of olive oil.

In case the ointment be employed, the patient is first thoroughly scrubbed, from head to foot with warm or cold water and soap, well dried, and then the ointment is gently rubbed into the skin, the greatest care being taken to annoint those portions of the skin particularly which are principally infected by the lice: such as the hands, the outer and inner surfaces of the extremities, the axiliary cavity, the umbilicus, etc., etc.

This gentle and gradual inunction must be continued until the entire quantity employed has passed into the skin. After this

process has been completed, the patient is dressed and put to bed, where he remains for the next twelve hours. Two ounces of the ointment are quite sufficient to annoint the entire surface of the body.

In case the styrax liniment be preferred, the body of the patient need not be washed before the application—a dry skin being preferable, as the liniment can then more easily penetrate the pores. If the skin be moist from perspiration, it should be dried before the liniment is applied. Six drachms of the liniment are sufficient in quantity to cover the whole body. The same care and precautions must be observed in this case as in that of the ointment.

The patient is again presented to the physician on the day following the application; and, after a careful examination, it is determined whether or not a second inunction be necessary. As a rule, one application suffices to cure the disease; and only in very rare cases has it been necessary to make more than two or three inunctions. I must not omit to add that the patient should be carefully washed after the treatment has ceased.

Although it is generally accepted that the increase of temperature is one of the most dangerous symptoms in febrile processes, the application of the most powerful means to prevent this complication, *i. e.*, the constant abstraction of heat, still meets with many opponents, not only among the public, but also in the Profession, who base their opposition upon the fear of producing rheumatism.

It is therefore the more important to prove the fact that, in the case of acute articular rheumatism, the constant application of ice affords the speediest and most agreeable relief.

Esmarch, as long ago as 1861, made some observations on this subject, and published them in "Langenbeck's Archive." During the course of the present winter, four cases were treated in the military barracks with the constant use of ice. The first case was that of an officer, who entered the institution with severe pains in the ankle-joints; during the course of the day the pain appeared also in the knee-joints; ice was immediately

applied. On the following day the upper extremities were also affected; the heart-sounds became weaker, the first having a blowing character. All of the affected joints were covered with ice-bags. On the fourth day the pain had almost entirely disappeared; on the fifth the heart-sounds resumed their normal character; on the sixth no local appearances were found; and on the seventh all febrile symptoms had disappeared.

Two other cases were cured within eleven days, the ice being employed continuously after the fourth day. In the fourth case under observation, the ice was first employed on the fifth day, and recovery set in within four days after; while, previous to the application of ice, the increase of temperature was progressive. The temperature curves of these cases teach a very suggestive lesson.

The results attained after the use of this mode of treatment are excellent, when compared with other methods often employed: such as packing in cotton batting, moist warmth, vesication, etc., etc.

As soon as the fear of using ice is removed, it will also be employed in acute articular diseases, not hesitating for fear of their being of a rheumatic nature. Many a limb will then be saved, which, under the present mode of treatment, is irrevocably lost. In answer to Kauffmann as to how long ice was to be applied, Esmarch answered that it must be used continuously until the local affection has entirely disappeared.

Esmarch emphasizes the difference between cold compresses and ice-bags. He says that the cold compresses, which are generally applied according to the directions of Priessnitz, cause a continual change from cold to warmth, and thus tend to increase the rheumatism.

The English "Blue-Book," for the year 1871, has just appeared, and I give you an abstract of one of the most interesting chapters, *i. e.*, the report on the sanitary condition of the British army during the year 1869. This opens with an exposé of the sanitary condition of the United Kingdom. The mean strength of the army, during the year mentioned, was 73,764.

The number of admissions into the military hospitals, during the same time, was 58,797, of which 694 died; the average daily number of patients under treatment was 3,011. Among the deaths reported, there were 51 which occurred in men who, at the time, were distant from their command. Out of every 1,000, there were 797 hospital admissions; 9.41 deaths and 40.82 sick daily. During the period from 1860–68, the average number of patients received into the hospitals was 956, deaths 9.52, and daily average of sick 48.54; the relative numbers during the year 1869, were 797, 9.41, 40.82. A marked improvement is noticeable in the health of the army.

I must draw attention to the fact that special mention is made in the report, whether or not the soldier was attached to his regiment at the time of death.

Syphilis and rheumatism were the most frequent affections, in the proportion of 10.46 per cent. Phthisis pulmonalis, and scrofula were the most fatal diseases, the mortality resulting from them being 2.81 per cent. The dock arsenals presented the greatest proportion of sick, (8.78 per cent.,) as well as deaths, (10.27 per cent). London and Windsor were the healthiest stations, giving only 7.06 per cent. of sick.

The following table of the number of deaths in every 1,000 of soldiers and citizens teaches a very suggestive lesson:

Table of Mortality in every 1,000 *Soldiers and Citizens.*

MORTALITY.	Below 20 years.	From 20 to 25 y's.	From 25 to 30 y's.	From 30 to 35 y's.	From 35 to 40 y's.	Above 40 years.
Of troops in active service in 1869	2.73	5.22	7.24	12.31	14.59	20.13
Of troops in active service in the years 1859 and 1867 - -	3.08	5.79	7.70	12.34	15.88	18.40
Of male civilians in England and Wales - - - - -	7.41	8.52	9.21	10.23	11.63	13.55
Of male civilians in the healthier districts of the kingdom. -	5.83	7.30	7.93	8.36	9.60	9.86

Among every 1,000 recruits presented for examination, there were rejected:

Owing to affections of the eyes and eyelids,	40.06
Owing to constitutional weakness,	38.71
Owing to varices,	38.86
Owing to anomalies of thorax and spinal column,	30.26
Owing to defects of the lower extremities,	28.17
Owing to cardiac affections,	27.66
Owing to varicocele,	25.19
Owing to syphilis	16.40
Owing to hernia,	13.81
Owing to loss of several teeth,	11.78
Owing to cicatrices,	11.61

Among every 1,000 of recruits examined, 739 were able to read and write; 38 could only read, but 138 were unable to do either.

Dr. Déclat, one of the most enthusiastic supporters of Lister's theory of the action of carbolic acid, recently communicated the results obtained by him, by the application of carbolic acid on carbuncles, to the Academié des Sciences at Paris.

The Doctor presented the history of seven cases of pustula maligna, which, though of the severest nature, were all cured in a comparatively short space of time, *i. e.*, from eight to fourteen days.

All the cases observed and treated by him recovered. On the other hand, two cases, which were received into the Hospital Necker, died in the course of a few days.

Dr. Déclat explains the mode of treatment employed by him in the following paragraphs:

1. A single cauterization of the pustule or pustules with pure carbolic acid, which is employed by means of a brush, after having been warmed or dissolved after the addition of a little alcohol.

2. Dressing the carbuncle with a solution of carbolic acid, 3, 4, or 5 per cent. in strength.

3. The use of the carbolic syrup of Déclat internally, of which a tablespoonful is given at regular intervals, 5 to 10 times during 24 hours. Every tablespoonful of the syrup contains 10 centigrammes of carbolic acid.

4. Subcutaneous injection of from 100 to 200 drops of a solution of carbolic acid of the strength of 1.5 per cent., 2 to 4 times daily.

These injections are only absolutely necessary when symptoms of constitutional infection are already presented.

Von Recklinghausen has found that, in a considerable number of infectious diseases, the probable cause of multiple metastatic abscesses is to be sought for in the miliary masses of minute organisms (micrococci).

These deposits of fungi are frequently met with in the kidneys, generally surrounded by tissues infiltrated with hæmorrhagic or purulent exudations, not only in the blood vessels, but in the tubuli uriniferi as well, from which they pass, even during life, into the urine.

Von. R. found another species of fungus in a case of scarlatina—knotty columns of a greenish color—in the renal pyramids. The casts found in the urine of this patient were also covered with this fungus.

The microscopical investigations by Haller, of Jena, as to the changes undergone in the blood of patients suffering from syphilis, has led Losdorfer, of Vienna, to direct his attention to the same subject. The result of L.'s investigations were presented by him, a short time ago, at a meeting of the Society of Physicians. The title of the address was as follows: "On the Possibility of Diagnosing Syphilis by Means of Microscopical Examinations of the Blood of the Individual Affected." Losdorfer stated that he has succeeded in finding, in a number of instances, a peculiar variety of fungus in the circulating fluid of syphilitics; a fungus which is peculiar to this disease, and which has never been observed before. He has given these bodies the name of *syphilis-corpuscles*. The examinations were, in the majority of cases, conscientiously controlled by Professors Stricker, Hebra, and Zeissl, who verify the assertions put forth by Losdorfer.

Dr. Kaposi, who, at the same time, made a number of observations, according to the method prescribed by Losdorfer, also

succeeded, in one instance, in finding the peculiar fungus mentioned above. This is a brief notice of a discovery which, if proven correct, must inevitably give a new impetus to the study of syphilis. Dr. Losdorfer will shortly publish an extended article on this subject, and I will not fail to keep your readers *au courant* in the matter. R. C. Brandeis, M. D.

Mobile, December 18, 1871.

Dr. E. S. Gaillard:

Dear Sir,—Your review of the Transactions of the Medical Association of the State of Alabama (session of 1871), which is published in the November number of the "Richmond and Louisville Medical Journal," was first seen by me on the 18th of November. On the 20th I addressed you a note, charging that you had fallen, no doubt unintentionally and in consequence of incorrect information, into several very grave errors of fact in regard to that part of your article which relates to the debate in the Association on the free-lecture system of the Medical College of Alabama; and asking to be allowed room in the next number—namely, the December number of your Journal, to make such corrections as would suffice to place the whole matter in proper light before the Profession and the public.

Your reply to this note, which is dated December 11th, and post-marked December 12th, reached me on the 14th. You say that my request was received too late to enable my counter-statements to appear in the December number, and courteously accord me the privilege to make use, for the purpose mentioned, of your January number. I am thus careful about dates, so that it may be evident, if I am too late for the January issue, it is through no fault or negligence of mine.

Two-thirds of your article are devoted to what is, no doubt, intended to be an excrutiating* satire upon the policy of our College. To this, it is no part of my purpose to make reply;

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* So spelled by the writer.—Ed.

but, in order that I may not be misunderstood, I beg to be allowed to quote here two short passages from my private letter of the 20th ultimo, already referred to.

1st. "Neither the injustice nor the severity of your strictures with reference to the policy of the College, in which I am honored with a professorship, would have extorted from me a word of complaint. We can afford to let such assaults go without answer, our present position and our future prosperity being so fully assured (!) and so far above any influence that you are able to exert against us, that we smile good-naturedly whenever you see fit to preach us a homily."

2d. "Please to understand that I do not propose to say one word in vindication of the policy of our College. You are welcome to say whatever you please on that subject, and I will make no remonstrance. I simply ask, as Secretary of the Association, and Chairman of the Publishing Committee, to be allowed to make a true statement of the facts in reference to the debate in question, which facts, relying on incorrect information, you have garbled and distorted."

Leaving aside, then, the general discussion of the College question on its merits, I shall confine myself strictly to one single point—namely, to the effects in relation to the discussion of the College question by the members of the Medical Association of the State at the Mobile meeting; and to the character of the report of that discussion, as published in the Minutes of the Proceedings of the Association for the current year.

If the charges which you make against the Publishing Committee are true, then it needs no refinement of logic to show that the gentlemen composing this committee have forfeited all claims to professional respectability and to personal honor; have fallen so low, indeed, that they have forfeited all legitimate right to the character and title of gentlemen.

For what is it that you charge against this Publishing Committee? Let the answer be given in your own words:

"Where a volume of Transactions is issued, as this has been,

full of inaccuracies and errors; partisan in its management and preparation; representing occurrences and speeches to have been part of the history of a meeting, when such occurrences and speeches have been since created; suppressing papers because they did not tend to foster partisan policies, and publishing, for a manifest purpose, other papers in defiance of the wishes of their authors, and in violation of all usages and rule, is it not proper, when all this is done, that the Medical Press of the country should come to the rescue of a body of State physicians who are, until they can meet again, devoid of help; who are misconstrued, misunderstood, and misrepresented?"

These, indeed, are strong charges.* And against whom are they made? You take care to state that the members of the Publishing Committee are all members also of the Faculty of the Medical College of Alabama, and that they have been guilty of all these abominations in the interests of that Institution. But you will allow me to suggest that you should have been more definite. There are eight professors and two adjunct professors in the Faculty of the College, and without a more explicit statement of the culprits, any of these ten gentlemen might fall under suspicion of these monstrous offences—certainly, a consummation not greatly to be wished by those among them who are innocent. I will therefore mention here, to prevent mistakes of this sort from occurring, to the discomfiture of most excellent persons, that the names of the members of this Publishing Committee, henceforth famous for the violation of all codes of morals and of honor, are as follows: JEROME COCHRAN, M. D., J. T. GILMORE, M. D., GEORGE A. KETCHUM, M. D. (I beg to add in parenthesis, my dear sir, that you will print them as I have written them—in capital letters.)

Having proceeded thus far with the composition of this letter *currente calamo*, the ideas crowding into my mind in embarrassing abundance, and the words of English undefiled,† as I

* Yet, not a single one of them is refuted in this letter.—ED.

† So reads the manuscript.—ED.

flatter myself, falling from the end of my pen—that marvellous weapon which, beneath the rule of men entirely great, is mightier than the sword—as fast as I could move it along the virgin pages, it will hardly be believed, that at this point I became embarrassed, hesitated, *scratched my head* in perplexity—yea, absolutely paused, lost in wonder and astonishment. But I did though, strange as it may seem.

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NOTE.—Here was inserted some matter personal in character, which was sent back to the writer, with the statement that the official signature of the Secretary of a Medical Society was not the proper one to be used in such a connection. Dr. Cochran's reasons, therefore, for his novel treatment of his head are not apparent to the reader, who will please forget the picture.—ED.

You say, that it is only against the public record of those implicated that your condemnation is addressed. You will do me a very great favor if you will indicate where the public record to which you have reference may be found.* Certain it is, that it is not in the Transactions which you have under review; and I, for one, am at a loss in what other quarter to look for it. You say of our Transactions: "The contents of this volume make it one of the most remarkable publications of the present year; indeed, there is but one element in regard to it more remarkable than its contents, and that is its history." With an analogous display of entithetic† brilliancy, I hope I may be allowed to say of your review of our Transactions: The history of this review makes it one of the most remarkable productions of the present year; indeed, the only thing about it which can be said to be more remarkable than its history, is the matter which it contains.

We will consider it, then—

1st. As to its history.

2d. As to its contents.

I. HISTORICAL.

A body of scientific gentlemen, composing the Medical Asso-

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* Teachers without a public record!!---ED.

† So spelled by the writer.—ED.

ciation of the State of Alabama, see fit to hold a meeting in the city of Mobile. Among other things, there is brought before them a proposition that there shall be spread upon their minutes a certain preamble and resolution which had been adopted by one of the Medical Societies of the State, said resolution being condemnatory of the course of the Medical College of the State with regard to the fees for lectures. It had been known for months that some step of this sort would be taken. The action of the Medical Society referred to had been communicated to all the other Medical Societies in the State, and extraordinary measures had been made use of to secure the concurrence of these Societies in the vote of censure alluded to. It had been published in one, and perhaps two of the most widely-circulated of the medical journals of the South. A circular-letter, by one of the prominent movers in the matter, had been distributed extensively among the medical men of the State. And the opposition to our plan of various college authorities had been invoked against us. The friends of the College, and particularly its faculty of professors, prepared themselves to make such defence as circumstances would render possible and expedient. The question was brought up in the shape of a report on Medical Education by the chairman of one of the standing committees. Then came the proposition to enter the preamble and resolution already mentioned on the minutes of the Association. This was opposed by the friends of the College, and several of them made speeches in vindication of the policy which the College had chosen to adopt. Four of these speeches were subsequently* committed to writing by their authors and published in the Transactions. After full and elaborate discussion, extending through a considerable part of two days, the vote was taken on the proposition in question, and it was defeated on the call of the ayes and nays by 30 against 9, a tolerably conclusive indication, one would think, of the opinions entertained by the Association. This question thus hap-

* So stated in the Review.---Ed.

pily disposed of, other business was done, and the Association adjourned. In due course of time the Transactions were published, and a copy forwarded to the "Richmond and Louisville Medical Journal"; and then comes out in the November number of that periodical the review which I have under consideration—the review which contains the 'strong charges' against the Publishing Committee. How did you find out all these abominable machinations, manipulations, and the whole catalouge of other ations,* too numerous to mention, which this most wicked of all wicked committees, past, present, or future, has been guilty of against the peace and dignity and good name and fair fame of the Medical Profession of the State of Alabama? As a distinguished Southern priest and poet phrases it, Who told you so? (A strong defence.—Ed.)

II. EXEGETICAL.

We will pass on now to consider "some of the grievances of which the Alabama physicians, members of their State Association, have justly to complain, in connection with this volume of Transactions"; and for purposes of clearness and convenience, we will take up your charges and specifications seriatim.

CHARGE I.

Suppressing papers because they did not tend to foster partisan policies.

Specification.—Dr. Riggs, of Selma, was not allowed to read a paper on "Medical Education" because it was understood to condemn the policy of the Mobile Medical College.

Answer.—Dr. Riggs was not in attendance on the meeting. The paper alluded to was presented by one of his friends. It was laid on the table by a decided vote of the Association,† and never came before the Publishing Committee at all.‡

CHARGE II.

Publishing, for a manifest purpose, other papers in defiance of the wishes of the authors, and in violation of all usages and rule.

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* English undefiled.---Ed.

† So stated in the Review.—Ed.

‡ Dr. Mastin's Paper was suppressed.---Ed.

Specification. — Dr. Weatherly's Address was published, though it was not referred to the Publishing Committee, and though he refused to furnish his manuscript to the Committee.

Answer.—Dr. Weatherly presented his paper as the report of the Committee on Medical Education, of which he was chairman. It became, necessarily, the property of the Association,* and, according to all parliamentary usages and rules, he had no right to withdraw it,† or to make use of it for his private purpose. He did choose to retain his manuscript, and to have it published to subserve his own purposes: First, in the "Mobile Daily Tribune"; secondly, in the "Montgomery Advertiser"; and thirdly, in the "Richmond and Louisville Medical Journal.‡ After giving it such extensive publicity, both professional and non-professional, upon what grounds could he object to its appearance in the Transactions?§ I will not even suggest the answer.

CHARGE III.

Representing occurrences and speeches to have been part of the history of a meeting, when such occurrences and speeches have since been created.

Specification.—There is no specification of occurrences other than speeches. Of these, it is asserted that speeches made by Dr. Weatherly and Dr. Williams, in opposition to the school policy, have not appeared; while speeches of a counter charac-

* Not without a vote of acceptance, and this, according to the published Transactions, was not taken.- -Ed.

† Without a vote of acceptance, it was his own private property.---Ed.

‡ This Report was not published in this Journal by Dr. Weatherly's request---Ed.

§ Because the Committee had not a shadow of right to it. For this reason, and for the additional reason that Dr. Weatherly refused his consent to its publication, the publishing of this Report was a gross breach of decorum, of official and even personal courtesy. The Report was really published in order that Dr. Cochran and others might publish, as replies to it, "speeches" which were not delivered during the sessions, and written after the Association had adjourned; while the actual replies of Drs. Weatherly and Williams to these "speeches" have been suppressed; Dr Cochran being the Secretary.

ter have appeared; most of the last speeches never having been presented on the floor of the Association, but having been since prepared.

Answer.—The speeches made by Drs. Williams and Weatherly were exceedingly brief,* were entirely explanatory, and the substance of them is accurately published in the Transactions. I wrote to them, asking them to furnish me with written copies of these speeches.† They did not reply to my letters. Afterwards I met them in Montgomery, and made the same request verbally, and face to face. They replied, that they had said but little, and did not care to have that little put in print.

As to the other part of the specification, that, namely, which refers to certain speeches which appear in the Transactions, but which were never presented on the floor of the Association, it is too indefinite to be definitely answered. In general terms, it is not true. It must be intended to apply to one, or more, or all of the four speeches made in defence of the College—the speeches, namely, of Drs. Anderson, Ketchum, Seelye, and Cochran; and with reference to these, it is false in part and in whole.‡ These gentlemen furnished copies of their own speeches. They are above any suspicion of misrepresentation and evasion. All who heard them, except§ perhaps a few who did not relish their sharp incisive logic, will testify that they

* Dr. Mastin's Report was not published, because it was too long; these speeches were not published because they were too "brief." The motto of this Committee is evidently "in medio tutissimus ibis." Dr. Cochran's remarks, made and not made, brief and in extenso, are all published. That a Committee should be so exercised for space as to exclude Dr. Mastin's Report, which he "was invited and requested" (his name being published in the list of "standing committees") to make, and yet exclude speeches because they were "brief" (publishing their own long speeches) is simply farcical.—Ed.

† How could they do this? Such an accomplishment is a natural gift. It requires a high degree of art to write out an extempore speech (a reply) after a material lapse of time.—Ed.

‡ The reviewer was governed by the testimony of those present; gentlemen who are never "false" in their statements.—Ed.

§ A very singular accuracy.—Ed.

are reported with singular accuracy.* The very words of the reports, of course, are not exactly the same,† although even in this particular the correspondence is so close as to have provoked surprise; but the whole substance of every one of these speeches was delivered on the floor of the Association.*

There were, indeed, a few members of the Association who objected, "for a manifest purpose," to the publication of this College debate. But its omission from the Transactions would have been like playing Hamlet with the part of the melancholy Dane left out.‡ It was the most distinctive, exciting, and important of all the proceedings of the Association. It has been published with as much fullness as possible, and it has been properly and accurately published.*

CHARGE IV.

Dr. Cochran made strictures upon Dr. Gaillard, of Kentucky, and these strictures are carefully published, but the effective and generous reply of Dr. Lynch has been suppressed.

Answer.—Dr Lynch made no reply, effective, generous, or otherwise, to anything said by Dr. Cochran; nor did he make any speech whatever on the College question. While Dr. Cochran was speaking of the extensive beneficiary system of the Louisville College, he was interrupted by Dr. Lynch, who asserted, in a few words, certainly not occupying, in their utterance, one minute of the time that flies, that Dr. Cochran was mistaken; that this College had not offered any such extensive distribution of beneficiary scholarships; but that the beneficiary system was restricted to Kentucky. Instantly two or three other gentlemen spoke up, testifying that Dr. Cochran was right and Dr. Lynch wrong, and that was the last of Dr. Lynch's effective and generous reply. (It was the last.—Ed.)

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* Those present testify differently.—Ed..

† The reviewer is here sustained.—Ed.

‡ The part of the Dane has, certainly, been fully included; but most persons use a different adjective in connection with the Dane. Readers generally agree with the Scotch critic; that he was "daft."—Ed.

CHARGE V.

Dr. Cochran makes an abortive and unhappy effort to condemn the policy adopted by the Louisville Medical College of extending generous aid to the sons of physicians, and to the poor and destitute young men of the country.

Answer.—All a mistake. Dr. Cochran did no such thing. Dr. Cochran holds, and has held, that the Louisville Medical College has the right to manage its own affairs in its own way, and that nobody has any right to complain. Dr. Cochran holds further, that every other college has the same right to manage its own financial affairs in its own way; and that the only concern that either the public or the Medical Profession have in the matter of the regulation of medical colleges, is to see whether their graduates are properly qualified to practice medicine (!!!) The point that Dr. Cochran did make, and whether it was abortive and unhappy or not, he leaves for others to say, was this, namely: That the declamations and denunciations in which Dr. Gaillard had chosen to indulge against cheap schools, came with a very bad grace from one in a school which advertised so industriously such a sweeping system of beneficiary scholarships; and in which there was good reason to believe that nine out of ten of its matriculants were upon the beneficiary list.*

All that you say about the Faculty of the College expecting and manœuvering to obtain a vote of endorsement from the Association is as utterly without foundation as your charges against the Publishing Committee. We already had the endorsement of the State Association† to the fullest extent—had

* The spirits of Munchausen and Paul Pry have formed, it seems, a psychological union. It is rumored that they have at Mobile been detected in intimate association.—Ed.

† The vote was 39; 9 against and 30 in favor of the Faculty; the Faculty voting to sustain themselves. Omitting their votes, (8), the result would be 22 to 9—giving an overwhelming majority of 13. If, from this, the vote of the Mobile delegates, (influenced familiarly and largely by local college relations), be eliminated, the result would be positively startling; to the Faculty

been endorsed by formal motion—had been invited to send a delegate to the State Association—had, in a word, received all the endorsement the Association could give, and there was nothing left for us to desire or ask for(!!) A proposition which was made to rescind the resolution of endorsement, which I have mentioned above, was received with so much indignation that it was not even allowed to be put to the vote. The Medical College of Alabama, then, has the endorsement of the Medical Association of the State.* It also has the practical endorsement of the Profession of Alabama and the adjacent States, if any inference can be drawn from the large (sic) and intelligent class in attendance on the present course of lectures.

Having thus passed in review every separate charge and specification which you have urged against our Publishing Committee; and having, also, I trust, shown that not one of them will bear unprejudiced examination, it only remains for me to thank you for the courtesy which enables me to present these explanations to the professional public, and to subscribe myself

Your obedient servant,

JEROME COCHRAN, M. D.,
Secretary of the Medical Association
of the State of Alabama.

NOTE.—Comment is unnecessary; not a charge refuted. Some might suppose that this was a fictitious letter written by some one for the purpose of destroying the moral and mental character of Dr. Cochran. It is proper to say that it is genuine. It must be admitted, however, that the grounds for such a suspicion are very strong. The letter is genuine and authentic, though the editor feels that, by publishing it, he is guilty of having been party to a case of melancholy suicide.—ED.

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certainly. This is, of course, the "endorsement of the State Association." This is evident.—ED.

* This has been satisfactorily demonstrated.—ED.

WASHINGTON, D. C., ——.

Circular.—The undersigned take this method of informing their friends that on January 29th, 1872, they relinquished their connection with the "National Medical Journal," as editors, or in any other capacity, and are not responsible for any articles that may appear in that Journal after the article on Cerebro-Spinal Meningitis, by Dr. Louis Mackall. They have been driven to this course by the action of the publishers, Messrs. Judd & Detweiler, who, as the proprietors, saw fit to insist upon the insertion of an article which, *in the shape presented*, did not meet with the approval of the editors.

The publishers propose to edit and issue the unfinished February number under their own management, purely as printers.

The undersigned regret the necessity for this course, as three numbers are still wanting to complete the volume; but they are confident that their friends will appreciate their motives, and take this opportunity to thank them for the many favors received at their hands (! !)

S. C. BUSEY, M. D.;
WM. LEE, M. D.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

A TREATISE ON HUMAN PHYSIOLOGY, DESIGNED FOR THE USE OF STUDENTS AND PRACTITIONERS OF MEDICINE. By JOHN C. DALTON, M. D. Fifth Edition, Revised and Enlarged. Philadelphia: Henry C. Lea. 1872.

In affirming that Professor Dalton's work is an excellent text-book, the very best, perhaps, in our language for first-course students of medicine, we are but giving expression to a very common judgment of medical teachers in the United States, and the unhesitating verdict of medical students. The appearance of five editions in the short space of eleven years is a striking proof of the continued popularity of a treatise which, from the

first, has been received with marked favor by the Medical Profession in America, and has been noticed in terms of warm commendation by the medical press of Great Britain. Nothing short of true and distinguished merit could have achieved such triumphs as these.

The particular features which have established the reputation of this work on so sure a footing have been too often pointed out in former notices to need a renewed recital. We have a less agreeable task to perform in pointing out certain blemishes which disfigure the work and mar its usefulness. Some of these blemishes were, perhaps, venial in the first edition of an elaborate treatise by a youthful author, but they have been perpetuated in all the succeeding editions. Nor has the author made good the promise of his preface (in the new edition of 1871) "to make the work in its present form a faithful exponent of the actual condition of physiological science." Indeed, the changes and additions in the successive editions have been astonishingly few and insignificant, despite the fact to which the author himself refers, that "the incessant advance of all the natural and physical sciences, never more active than within the last few years, has furnished many valuable aids to the special investigations of the physiologist." We have looked in vain for such kinds and degrees of "changes and additions" as were necessary to place the work abreast of the latest advances in physiological science. In this respect it stands in disadvantageous contrast to not only the elaborate work of Dr. A. Flint, Jr., on the "Physiology of Man," with which it is, perhaps, scarcely fair to compare it, since the two treatises differ in their scope and aim, but also to the "Outlines of Physiology, Human and Comparative," by John Marshall, of University College, London, a work which, like Professor Dalton's Treatise, was "designed with the special view to its utility as an educational book."

We do not here refer to such omissions of entire topics, Histology, for example, as are explained by the fact that the author apparently thought it better to remand the student to special

works on the subject than to enlarge the dimensions of his own treatise. In the single instance in which the author has deviated from this rule, and has entered into histological details, his success causes us to regret that he has not gone more fully into that subject. We refer to his excellent description of the two kinds of nervous tissue.

But our specific charge of incompleteness has respect to the author's practice of utterly ignoring important facts and generalizations discovered by other votaries of the science, unless they strike his fancy. There is no allusion to the great and important generalization of the conservation and correlation of forces, and to its bearing on the Dynamics of the Human Body. Many otherwise excellent chapters disappoint us by the omission of striking and significant facts, which, by almost every other writer on physiology, are put prominently forward.

The author's exposition of the philosophy of science, as contained in the introduction to his treatise, is singularly shallow and defective. Even at the date of the first edition we were surprised to find a reproduction of some of the silly crudities of the late Dr. Bartlett's "Essay on the Philosophy of Medical Science." That they have been repeated in every successive edition, not only with complacency, but with the tone of superior sagacity and wisdom, really amazes us.

The subject is of sufficient importance to justify a somewhat extended criticism. Among other propositions intended to serve as guides for the student of physiology, the author announces the two following with special emphasis:

"III.—The study of physiology, like that of all other natural sciences, is a study of *phenomena*, and of phenomena alone."

"IV.—There is *only one* means by which physiology can be studied, that is, the observation of nature."

Now, we take issue with Dr. Dalton on both these propositions. It is true that the specifications he gives under each head are, for the most part, defensible, when considered in themselves, but they are far from sustaining the general state-

ment. It is far from being true that physiology, or any other department of natural science, is a study of *phenomena* alone. This constitutes but one part of the two-fold problem which the student of science encounters, a part which has been appropriately called the narrative division; and, if the student went no further, he might know something of natural history, but absolutely nothing about natural philosophy. This second branch of natural science takes up phenomena collected by observation, and viewing them as effects, seeks to discover the forces upon which they depend. In no proper philosophical sense can phenomena, or the effects of force, be identified with the forces which produce them, and we must insist that science is a study of forces as well as of phenomena.* We also insist that the proper interpretation of nature by the investigation of forces and the laws of their operation, involves the necessity of other and higher intellectual processes than simple observation, as we hope to make clear before we have done.

In illustration of the first of the two propositions, Dr. Dalton says, "the *essential* nature of the vital processes and their *ultimate* causes are questions beyond the reach of the physiologist, and cannot be determined by means of investigation which are at his disposal." The force of this illustration lies wholly in the adroit interpolation of the qualifying terms "essential" and

* This remark as to the distinction to be made between phenomena considered as the effects of force and the forces which produce them, is liable to misconstruction, and needs, therefore, to be qualified and explained. Of course we do not overlook the fact that an effect is equal to its cause, and thus that the effect of a force may itself be some other force exactly equivalent to its cause, and in its turn may produce other effects in an indefinite series. But we do mean to affirm that while certain effects are discovered by simple observation, the causes which give rise to them often lie outside of the sphere of direct observation, and are discovered on evidence of a different kind. Heat, as a phenomenon or effect, may be manifest to our senses in various ways. Heat, as a cause of this phenomenon, is held to be "a mode of motion." It will not, we presume, be pretended that this dynamical theory of heat, now so generally accepted and rendered possible by the brilliant lectures of Professor Tyndall, can be demonstrated otherwise than by the employment of all the methods of inductive and deductive logic.

"ultimate." Of course, there are "ultimate" facts in every science which limit our means of investigation; but it is as easy to furnish illustrations of faulty reasoning, leading to mischievous errors, from assuming certain recondite phenomena to be ultimate, as it is to point to instances of profitless speculation in seeking to explain really ultimate facts. The author refers to the fruitless search for the *reason* why menstruation returns at the end of every four weeks, and says, "observation of nature, which is our only means of investigation, cannot throw any light upon this point, but only shows us the fact that menstruation *does* really occur at the above periods, together with the phenomena which accompany it; and the conditions under which it is hastened or retarded, and increased or diminished in intensity, duration, etc. If we employ ourselves, consequently, in the discussion of the reason above mentioned. we shall only become involved in a net-work of hypothetical surmises, which can never lead to any definite result." This is, indeed, an extraordinary assumption. What! every attempt to explain phenomena, hitherto unsolved, must necessarily involve us in a net-work of hypothetical surmises which can never lead to any definite result(! !) Observe that though this remark is made with direct reference to a special case, that case is used to illustrate a general proposition. Professor A. Flint, Jr., in his "Physiology of Man," says, with reference to the subject of the coagulation of the blood: "On the other hand, we are not justified, with Robin and Verdeil, in abandoning the subject with the assertion that it is 'as vain to seek after the cause of this fact as to inquire why fibrin exists, why sulphate of copper is blue, etc.;' assuming that fibrin coagulates merely because it has the property of coagulation, as albumen is coagulated by heat, or casein by acetic acid. *An extension of this method in physiology would put an end to all generalization restricting the operations of the intellect to the mere observation of phenomena.*" This restriction is precisely what Dr. Dalton enjoins as being in strict accordance with the true philosophy of science. Happily, he does not practice his own precept, or

he never could have made so many valuable contributions to science.

In further illustration of the position that "there is one only means by which philosophy can be studied, that is, the observation of nature," he proceeds to say, "its phenomena cannot be reasoned out by themselves nor inferred by logical sequence from any original principles, nor from any other set of phenomena whatever." Let all this be conceded, and yet it does not establish the general proposition. This affirms that observation of nature is the one only means by which philosophy can be profitably studied. The argument states that its *phenomena* cannot be ascertained by certain processes. But phenomena, as we have seen, are not all of science. Phenomena must be generalized according to their relations. Is a generalized relation cognizable by the senses? Does not its recognition depend upon other intellectual processes than "mere observation of phenomena?" Why, then, should so eminent a teacher as Professor Dalton, in a work expressly designed for educational uses, reïterate such partial views of the philosophy of scientific methods, and attempt to sustain them with such barren truisms?

We might, indeed, take exceptions to the validity of some of these statements, as well as to the unproductiveness of all. For when the author affirms that "neither can we infer the truths of physiology from those of anatomy, nor the truths of one part of physiology from those of another part, but all must be ascertained directly and separately by observation;" and when he repeats this in a more general form in italics, as a mark of special emphasis, by saying that "*the facts of the latter (physiology) can never be, in the least degree, inferred from those of the former (anatomy), but must be studied by themselves,*" we submit that this is a far too sweeping statement, and we cannot but recall the traditional account of the discovery of the circulation of the blood by Harvey as an inference from the anatomical fact of the existence of valves in the veins opening only toward the heart. It was the assumption of the fact of the circula-

tion which alone enabled Harvey to demonstrate the reality of the fact. Other persons had seen all he saw, and but for the guiding conception he would not have advanced any further than they had gone. In point of fact, all the most valuable discoveries in science have been the fruit of intelligent search under some such guiding principle, the cases being extremely rare in which they were the result of mere purposeless "observation."

In those departments of physical science in which the mathematical analysis can be employed as a means of unfolding the consequences involved in a given theory, facts are brought to light which never could have been discovered by direct observation. Sir John Herschell, after citing a number of such cases, such as the production of darkness by two rays of light proceeding from certain points and made to fall on precisely the same given spot, a necessary deduction from the assumed undulatory theory of light, afterwards verified by experiment the remarkable phenomena of circular polarization, those of double refraction, etc., proceeds to say: "But even such results, striking as they are, yet fall short of the force with which conviction is urged upon us when, through the medium of reasoning too abstract for common apprehension, we arrive at conclusions which outrun experience and describe beforehand what will happen under new combinations, or even correct imperfect experiments and lead us to a knowledge of facts contrary to analogies drawn from an experience wrongly interpreted or overhastily generalized."*

It will be admitted, we presume, that the theory of gravitation is a generalization which belongs to the domain of physical science. Was this universal truth discovered by observation alone? Was it not first conceived as a theory, and then its consequences calculated, and these found to agree with the phenomena, whose significance could not have been otherwise appreciated?

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* Sir J. Herschell, Discourse on Natural Philosophy.

Did not Mayer, of Heilbronn, announce the law of the conservation and correlation of forces on purely *a priori* grounds before Mr. Joule furnished the first experimental demonstration of its truth? How, indeed, could it ever have been demonstrated by actual experiment, unless it had first been conceived as an hypothesis of a legitimate kind?

We may not, indeed, hope to accomplish in the investigation of physiological laws the same precise results as those which characterize the generalizations of the purely physical sciences which, dealing largely with the relations of quantity, admit the use of mathematical analysis; but the same general principle obtains, and we are equally or still more dependent on the resources of the deductive logic for an extension of our means of research. Mr. Tyndall considers it one of the highest claims on the part of Dr. Mayer to the honorable position now universally accorded to him as a man of true scientific genius, that he was not only "the first to raise the conception of the interaction of natural forces to clearness in his own mind," but that he extended his views to "organic motion," and "applied the mechanical theory of heat in the most fearless and precise manner to vital processes."

In the sciences which deal with the almost inextricably complex phenomena of living beings, direct empirical observation seldom suffices to establish laws of a high degree of generality, and the earnest searcher for truth is constrained to invoke the aid of the imagination, and to interrogate nature by making provisional assumptions, whose value he then proceeds to test by comparing the conclusions which are deductively derived from them with the phenomena as they are actually presented to his observation. It was, as we have seen, in this way that Harvey discovered the circulation of the blood. So, too, the great and beneficent law of the protective influence of vaccination owed its discovery to the deductive as well as inductive sagacity of the immortal Jenner. It has been sagaciously remarked by Prof. Huxley, that there are periods in the history of every science, when a false hypothesis is not only better than none at

all, but it is a necessary forerunner and preparation for the true one.* This remark finds a striking exemplification and justification in the successive phases in which the Atomic Theory has presented itself. Such provisional hypotheses are thus useful, not only as a system of *memoria technica*, but by "colligating" a body of facts by "an appropriate conception" (to employ the apt phrase of Dr. Whewell) they serve as guides for further observation, whereby their own validity may be verified or corrected. Such an employment of hypotheses, as an aid to observation is very different from the picture which Dr. Dalton presents to medical students as a warning, when he speaks of their "becoming involved in a net-work of hypothetical surmises, which can never lead to any definite result." It is just the difference between the legitimate use of appropriate hypotheses to be verified or corrected by the observations which they suggest and aid, and the illegitimate hypothetical surmises which, of course, do not lead to any definite result.

In a few pregnant sentences in the first chapter of his popular treatise on Elementary Physiology, Prof. Huxley throws more light on this subject than can be gathered from the entire introduction to Dr. Dalton's work. After stating how some of the bodily actions are studied, by citing phenomena ascertained by direct observation, he proceeds to say: "And lastly, when we try to ascertain what happens in the eye when that organ is adjusted to different distances, or what in a nerve when it is excited; or of what materials flesh and blood are made, or in virtue of what mechanism it is that a sudden pain makes one start, we have to call in operation *all the methods of inductive and deductive logic;* all the resources of physics and chemistry; and all the delicacies of the art of experiment. The sum of the facts and *generalizations* at which we arrive by these various modes of inquiry, be they simple or be they refined, concerning the actions of the body and the manner in which these actions are brought about, constitutes the science of human physiology."

* T. H. Huxley, in British and Foreign Medico-Chirurgical Review, on the Cell Theory, October, 1853.

Physiology, then, deals not only with phenomena as discovered by observation, but also with generalized relations, which, in no proper sense, can be said to be the objects of direct observation, but of which the notions arise in the mind in view of particular truths which observation has either disclosed or confirmed. We may be indebted to observation for the knowledge of phenomena actually taking place or of facts accomplished in the past, but it is a strange perversion of language to say that observation makes known to us what will happen in the future. Now, a law or general principle in science in expressing a universal truth, anticipates future occurrences. This is the province not of observation, but of the generalizing faculty, which is a totally different process of the intellect from that of mere observation.

The chapter on Animal Heat is, in our judgment, another great blot in an otherwise most admirable treatise. After a very lucid statement of the main facts relating to this subject, the author considers the question of the mode of generation of animal heat, and exhibits a method of practical logic which is no better than his exposition of the philosophy of medical reasoning. He professes to refute the theory of combustion, while in point of fact, some of his arguments apply not to that theory in general, but only to Liebig's somewhat misleading classification of alimentary principles into *nitrogenous* or *plastic elements* on the one hand, and *hydro-carbons* or *respiratory* elements on the other. We say misleading classification, inasmuch as it seems to imply that the nitrogenous principles are incapable of combustion, and that the hydro-carbons serve only as respiratory fuel. And yet the classification in question is not wholly wrong, since though an excess of albumenoid matter may be gotten rid of by oxidation without previous conversion into tissue, and on the other hand, starchy and saccharine hydrocarbons may be converted into fat, and thus be stored away as fatty tissue, still the main object of the former is to be assimilated to the tissues, and of the latter, to undergo oxidation. But whether this latter proposition be true or not, it has nothing

to do with the determination of the question as to the truth or falsity of the doctrine of combustion as the main source of animal heat. That doctrine may hold true whether the combustible material be derived exclusively from the tissues undergoing disassimilation, or partly from this source and partly from the hydro-carbons in the blood.

In order to exhibit the irrelevancy of the reasoning by means of which Dr. Dalton attempts to overthrow this doctrine, we propose to cite and examine his chief arguments and statements.

"I.—It is not necessary to regard the evolution of heat as dependent solely on direct oxidation. This is only one of its sources, as we constantly see in external nature, etc." This no one will deny. The advocates of the doctrine of combustion as the main source of the animal heat, base their conclusion on the fact that the conditions of combustion exist, and not on an ignorance of the fact that there are other modes of generating heat.

"II.—In vegetables there is an internal production of heat, as well as in animals, and Dutrochet found that its maximum of intensity was about the middle of the day, just at the time when the absorption of carbonic acid and the exhalation of oxygen are going on with the greatest activity. The proper heat of *plants*, therefore, cannot be the result of oxidation or combustion, but must be dependent on a different proces." It suffices to say, that even if this be so, it proves absolutely nothing as to the source of the proper heat of *animals*, which (and not the origin of the heat of *plants*) is the question under consideration. We add, that though this infinitesimal amount of heat in plants may arise from other sources besides oxidation, there are two periods in the life of flowering plants when they produce a notable amount of heat, and when such heat can be easily shown to depend upon combustion—namely, in the processes of germination and inflorescence. At these periods the plant becomes an animal *quoad* this function.

"III.—In animals the quantities of oxygen absorbed and of

carbonic acid exhaled do not correspond with each other. Most frequently a certain amount of oxygen disappears in the body over and above that which is returned in the breath in the form of carbonic acid. This overplus of oxygen has been said to unite with the hydrogen of the food so as to form water, which also passes out by the lungs; but this is a pure assumption, resting on no evidence, for we have no experimental proof that any more watery vapor is exhaled from the lungs than is supplied by the fluids taken into the stomach. It is superfluous, therefore, to assume that any of it is produced by the oxidation of hydrogen." Now, Dr. Dalton himself furnishes the data for refuting this last statement. He gives on page 370 the following table, to show in an approximative manner the quantity of the different ingredients of the *ingesta* and *egesta*, as compiled from the results of the experiments previously described:

Absorbed during 24 Hours.		Discharged during 24 Hours.	
Oxygen	1,470 lbs.	Carbonic acid	1,630 lbs.
Water	4,535 "	Aqueous vapor	1,155 "
Albuminous matter (dry)	0,305 "	Perspiration	1,930 "
Starch	0,660 "	Water of the urine	2,020 "
Fat	0,220 "	Urea and salts	0,137 "
Salts	0,040 "	Fæces	0,358 "
Total	7,230 "	Total	7,230 "

Now, by adding together the water of the pulmonary vapor, that of the perspiration, and that of the urine, we obtain 5,105 pounds as the aggregate amount excreted, while the amount ingested is only 4,535 pounds, making the former exceed the latter by little over half a pound. This is probably a little too much, but beyond all question, an excess of water excreted over the amount ingested is invariably found, and such excess fluctuates between four and eight ounces. The source of the water thus formed in the system is made manifest by the following tables, in which Vierordt has attempted to institute a comparison between the chemical constitution of the *ingesta* and that of the *egesta*.*

* Borrowed from Marshall's Outlines of Physiology, Human and Comparative.

A.—*Ingesta During Twenty-Four Hours, in Ounces.*

FOOD, DRINK AND AIR.	Quantities consumed.	H_2O of starch and water.	C.	H.	N.	O.	Salts.
Albumen - -	4.23		2.29	0.28	0.66	1.00	
Fat - - - -	3.17		2.47	0.36		0.34	
Salts - - -	1.13						1.13
Starch - - -	11.63	6.46	5.17				
Water - - -	93.00	93.00					
Oxygen of air - -	26.24					26.24	
Total. - -	139.40	99.46	9.93	0.64	0.66	27.58	1.13

B.—*Egesta During Twenty-Four Hours, in Ounces.*

EXCRETIONS.	Quantities excreted.	Water.	C.	H.	N.	O.	Salts.
Breath, carbonic acid and water - - -	43.40	11.66	8.79		?	22.95	
Perspiration, carbonic acid and water - -	23.62	23.30	0.09			0.23	
Urine { Urea	62.31	59.98	0.24	0.07	0.56	0.41	0.92
Urine { water							
Urine { extractives.			0.10	0.03			
Solid excreta - -	6.07	4.52	0.71	0.10	0.10	0.43	0.21
Water formed in the system	4.00			0.44		0.27	
Total - -	139.40	99.46	9.93	0.64	0.66	27.58	1.13

According to this table, which, doubtless, has been constructed in accordance with reliable observations, the oxygen which is not returned as carbonic acid is mostly consumed in the oxidation of hydrogen.

Dr. Böcker found, as the result of very careful experiments on himself, that the amount of water formed in the system bore some proportion to the amount ingested. Thus, on the full water days, when he drank an unusual amount of water, he excreted 1,804 grammes in excess of the quantity taken in, whereas on the ordinary water days there was excreted an ex-

cess of only 1,490 grammes. Thus it appears that water promotes the oxidation of tissues.

"IV.—It has been shown in a previous chapter that the carbonic acid which is exhaled from the lungs is not primarily found in the blood, but makes its appearance in the substance of the tissues themselves; and furthermore, that even here it does not originate by direct oxidation, but rather by a process of decomposition similar to that by which it is produced from sugar in the alcoholic fermentation." As to the first part of this statement, we take no exception. We grant that a part, perhaps much the largest part of the carbonic acid is formed in the tissues themselves to which oxygen is carried by the blood vessels. All we contend for is the production of the carbonic acid by oxidation. The latter part of the passage just cited is somewhat amplified in another place, where the author asserts "that the carbonic acid exhaled is not a direct product of oxidation, but that it originates, on the contrary, in all probability, by a decomposition of the organic ingredients of the tissues, resulting in the production of carbonic acid on the one hand and of various substances on the other, with which we are not yet fully acquainted, in very much the same manner as the decomposition of sugar during fermentation gives rise to alcohol on the one hand and carbonic acid on the other. The fermentation of sugar when it has once commenced does not require the continual access of air. It will go on in an atmosphere of hydrogen, or even when confined in a close vessel over mercury, since its carbonic acid is not produced by direct oxidation, but by a decomposition of the sugar already present. For the same reason, carbonic acid will continue to be exhaled by living or recently dead animal tissues even in an atmosphere of hydrogen or in a vacuüm."

As a specimen of medical reasoning, this is absolutely astounding. Is it possible that the author does not see the difference between the resolution of sugar into alcohol and carbonic acid, having, in itself, a sufficient quantity of oxygen to account for all the carbonic acid, and the production of a large

quantity of carbonic acid by animal tissues absorbing oxygen *ab extra?* Does he mean to assert that these tissues will exhale carbonic acid in hydrogen, or *in vacuo,* in as large quantities as when they absorb oxygen? If not, what force has his argument? Let us put this argument into a syllogistic form. The *major premiss* may be stated thus: Whenever the production of heat in a decomposing body is attended by the evolution of carbonic acid, *without the appropriation of a correspondent amount of oxygen, ab extra,* as in the alcoholic fermentation of sugar, then such heat cannot be the result of oxidation. This might, perhaps, be questioned, but let it pass. We proceed to the *minor premiss:* Animal heat, as manifested in living animals, is attended by the evolution of carbonic acid, *and with the absorption of an adequate quantity of oxygen. Conclusion:* Therefore, animal heat is not the result of oxidation!!

Dr. Dalton's fifth argument only goes to show that heat is produced in the substance of the tissues, rather than in the blood. It is, undoubtedly, produced in both. The conclusion of the author that "animal heat is a phenomenon which results from the simultaneous activity of many different processes taking place in many different organs, and dependent, undoubtedly, on different chemical changes in each one," may be admitted with the large qualification, that very much the greater part of it, amounting, doubtless, to more than nine-tenths of the whole, arises from oxidation. Nor does it matter whether the oxidation be *direct* or be marked by intermediate decompositions; for, "according to the degree of oxidation which occurs, the same amount of heat is evolved, whether this be direct and rapid or complex and slow." Liebig (Familiar Letters, pp. 342, 343), referring to the careful experiments of Dulong and Despretz, says: "It is easy to see that when an animal is made to breathe in a proper apparatus, entirely surrounded with cold water, the number of degrees of heat given off by the animal in a definite time to the surrounding medium may be easily determined. In this way it has been ascertained with certainty that the number of degrees of heat produced by

the animal, by the process of oxidation in its body, corresponds very closely to that which the same apparatus would receive if it were heated by a fire in which a quantity of oxygen, equal to that in the ascertained carbonic acid, and also to the portion of oxygen which has disappeared as water, had been converted into the same quantities of carbonic acid and water." Here, then, we have a cause which is at the same time true, appropriate, and adequate. It seems illogical to reject an explanation thus accredited and well nigh demonstrated by exact experimental processes, in order to fall back upon vague and uncertain speculations as to the possible operation of other causes not so well determined. We prefer to accede to the proposition of Liebig, "that the question of the origin of animal heat is satisfactorily solved."

As to most of the other chapters of Dr. Dalton's work, we are happy to be able to speak in terms of unqualified praise. Those which treat of the physiology of the senses are, perhaps, less complete and less satisfactory than other portions of the neurological department of the work. The physiology of reproduction, with which the author concludes his treatise, is based upon original observations, and is above all praise. This subject has never, we think, been half so well treated by any other writer.

A Collection of Remarkable Cases in Surgery. By Paul F. Eve, M. D., Professor of Surgery in the Medical Department of the University of Nashville. Philadelphia: J. B. Lippincott & Co.

One is conscious of doing a real service to the members of the Profession by calling their attention to this remarkable and valuable work. While the author does not assume or pretend to give all of the most interesting cases on record, being rather a practical sufferer as an author by *l' embarras des richesses*, it cannot be denied that he has made his collection with rare

judgment, and from a most extensive and fertile field. It is superfluous to add that there is no one more competent, both from extensive research and large practical experience to aggregate, as he has done, what is really rare, novel, interesting, and even amusing, in the published literature of surgery.

This well-designed and well-executed labor of Dr. Eve is indeed classic in history, nature, and origin. Harvey taught that one of the surest means of advancing the science and art of medicine was by a study of the rarer forms of disease, and in Paris, a few years since, it was a part of the duty of him who taught and explained the doctrines of Hippocrates to analyze and declare the nature of the obscure forms of all pathological manifestations.

The work here noticed should certainly be very generally purchased; it contains over 800 octavo pages; it is handsomely and substantially bound in leather; it is a mine of surgical wealth; it is replete with instruction and entertainment, and the cost is remarkable, only $2.75. The index is very complete and valuable. The volume is divided into several departments; cases of rare interest in connection with the head; spinal column; face; neck; chest; abdomen; pelvis; genito-urinary organs; the extremities; and last, though one of the most valuable, the department giving cases of a miscellaneous character. Among these miscellaneous cases, the reader finds a few of special interest; a woman with a tumor of 170 pounds. This case might well be said, with the humor of Dupuytren, to be that of a woman attached to a tumor; amputation of the head, the patient living several hours afterwards; a doctor performing lithotomy upon himself, etc., etc. Anecdotes of great surgeons and physicians are read on almost every page.

The work is peculiar, indeed, and it will amply repay every purchaser for the small sum expended.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

The Hypodermic Use of Ergotine.—Case I.—A female was delivered of a child June 11, 1870. After-birth being slow in coming away, from want of uterine contractions (an hour after delivery), at the request of Professor Mears, who was present, mm. v. ergotine were injected on inner side of right thigh. In precisely six minutes the uterus contracted firmly, sending away the placenta.

Case II.—September 4, 1870, a female suffering with inefficient and annoying labor-pains. Two-thirds drachm fl. ext. ergot was administered, but no effect could be perceived. One hour later, mm. v. ergotine were injected on inner side of right thigh. In eight minutes a short but decided contraction of uterus occurred. Two hours afterwards two drachms of ergot were given by the mouth, but again without effect.

Case III.—November 15, 1870, a female was delivered of a child. The placenta not having come away in half an hour, and there having been no contractions of uterus, traction of the cord was made, and the placenta partially removed. Not being able to remove it further, and no contractions procured yet, efforts were discontinued. After a few minutes the patient's face was noticed to be bloodless; her eyes closed; the pulse extremely feeble. Examining, the bed was found overflown with blood. Immediately injected mm. v. ergotine on inner side of right thigh. Six minutes after, ℥i. fl. ext. ergot was given by mouth. One minute from the last, seven minutes from the injection, a firm contraction occurred, the after-birth easily removed, and hæmorrhage at once ceased.

P. S.—The ergotine used is the officinal preparation, diluted with two parts of distilled water. If diluted less, it remains unabsorbed under the skin for a greater time.—*Ind. Jour. Med.*

Antiphlogistic Value of Ergot.—Dr. Jacobi holds ("Medical Record" October 1, 1870) that ergot acts through the nervous system, and especially through the sympathetic, upon the unstriped muscular tissue under its control. Thus it is that ergot produces its peculiar effect upon the muscular tissue of the uterus, the unstriped fibres of the bladder, the muscular layers of the intestines, and especially upon the muscular coat of the blood vessels. Its power in diminishing the size of the blood vessels is manifest from its value as a hæmostatic; and it is of this power we have to speak in considering its antiphlogistic effect.

This effect is noticeable in fevers generally, and particularly in fevers of the intermittent type. It is an established fact, in my opinion, that many cases of obstinate intermittent fever will, when no longer benefited by quinia or arsenic, still be benefited by the action of ergot.

Dr. Jacobi states that he has given a mild preparation of ergot with a uniformly beneficial effect in many cases, not uncommon in women and children, of spinal meningitis resulting in pain, slight fever, occasional convulsions, partial or total paralysis. He has given it advantageously in the first stage of the so-called infantile or dental paralysis dependent upon congestion of the spinal cord. The persistence of the disease he attributes to dilatation of the blood vessels, and he gives the ergot to effect their contraction. In cases of cholera minor, not connected with rheumatism, but with pain in some portion of the spinal column, ergot is often serviceable in removing the symptoms.

Dr. Jacobi uses as large doses as two drachms (to a child) of Squibb's fluid extract in the day, or from four to seven grains of Bonjean's ergotine. When its use is to be long continued, for chronic hæmorrhages, etc., he gives commonly about a scruple of the ergotine, daily to an adult, and to a child in proportion to age. He has never seen any of the symptoms of so-called ergotism, whether of the spasmodic or gangrenous form, nor has he any fear of it resulting from the use of ergot in this dose.

Ergot in Paralysis of the Bladder. By Dr. Theodor Roth, Eutin.—Dr. Roth furnishes the details of a series of cases in which ergot has proved advantageous in the treatment of this disease. The following is one of the cases he describes: A laborer, aged 49, of powerful build and otherwise in good health, experienced, for some time previous to seeing Dr. Roth, difficulty in passing water, consisting in frequent desire and pain, whilst on attempting to micturate a delay occurred, which was not overcome or shortened by forcing. When the water at length flowed it only dribbled. On one occasion he had been working for many hours with the feet in wet earth, and on making the attempt, found it impossible to pass any water. Violent efforts to micturate gradually came on, with pain in the lower part of the belly, and he then applied to Dr. Roth. On the introduction of a catheter, a large quantity of urine was evacuated, by which the pain was removed. Twelve doses of ergot were now administered, of about eight grains each, at intervals of three hours. He was told to return if any inconvenience in the passing of the urine was experienced, to keep himself at rest and warm, to take slops, and to evacuate the bladder as soon as he felt any desire. No further treatment, however, was required, and the state of the man, after the lapse of six days, was better than it had been for a long time previously.—*London Practitioner, from Deutsche Klinik.*

Iodine a Remedy for the Incontinence of Urine of the Aged.—By Dr. John B. Schmidt.—Dr. Schmidt, after referring to the treatment adopted by Oppolzer in this affection when dependent on debility of the sphincter vesicæ, viz., the application of astringents, as rhatany, tannin, and iron, relates two cases, one in a woman of 80, and another in a man of 74 years of age, in which a rapid cure was effected by the use of this remedy; but when it had once been given, it could not be dropped without a recurrence of the affection, and it had consequently to be continued till death occurred. The quantity given was a drop of the tincture every two hours; at a later period it was given from two to six times a day, and in addition one-tenth of a grain

of iodine was given in pills.—*Practitioner*, Oct., 1870; *from Alleg. Med. Zeit.*, 1870, No. 18.

Chloral in Midwifery.—Dr. Lambert, late House-Surgeon to the Edinburgh Maternity Hospital ("Edinburgh Medical Journal"), arrives at the subjoined conclusion in regard to the administration of chloral in cases of labor: Chloral is an agent of great value in relief of pain during parturition. It is demonstrated that labor is conducted from its commencement to its termination, without any consciousness on the part of the patient, under the sole influence of chloral. The exhibition of chloral in nowise interferes with the exhibition of chloroform. The proper mode of administering chloral is in fractional doses of 15 grains every quarter of an hour until some effect is produced; and according to the nature of that effect the further administration is to be regulated. Some patients will require doses of one drachm; and it is better to produce an anæsthetic effect by three drachms given in the space of two hours than by one drachm given singly.

This agent rather produces uterine contraction by suspending all reflex actions which tend to counteract the incitability of the centres of organic motion.

Labors under chloral will probably be found to be of shorter duration than when natural. The general conditions under which chloral is to be administered are the same as those which regulate the administration of chloroform, and the rules laid down by the late Sir James Y. Simpson, M. D., in connection with this subject, must be rigidly adhered to.

Faradization in Chloroform-Asphyxia.—At a late meeting of the Manchester Medical Society, Dr. Hardie recounted two cases of chloroform-asphyxia in which, after the failure of ordinary means of resuscitation, such as cold affusion, artificial respiration, galvanism of the chest, etc., recovery was effected by Ziemmsen's method of pressing both poles of the battery deeply in at the root of the neck, one over each phrenic nerve. This caused a gasping inspiratory movement, when the battery was

temporarily removed and the chest-walls compressed; and so on, alternately, until restoration was complete.—*Med. Gazette.*

Spontaneous Combustion.—Another case of this kind is added to the list by Dr. Bertholle, in the "Union Médicale" of February 15, 1870. It was that of a woman of intemperate habits, thirty-seven years of age; the viscera and portions of the limbs were consumed, the clothes and hair escaping. As quoted in the "London Lancet" (we have not seen the original account), it would seem to have been a genuine case, the access of fire from without having been impossible.—*Med. Times.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Enterotomy Recommended in Ileus.—Dr. Frantzel performed it with complete restoration of the abdominal functions. The place of obstruction cannot be investigated except in rare cases. The intestine is to be opened where the tympanitic sound is heard; if possible, in the region of the cœcal valve, parallel with Poupart's ligament. The intestine and abdominal wall must be tightly sewed together before the incision. Frantzel advises against fluid mercury, and mentions a case where rupture of the bowels was hastened by that treatment. The post-mortem section proved that enterotomy would probably have been successful.—*Med. Chir. Rundschan.*

Another article on this subject is published in the "Memorabilien."

Maunoir, Maisonneuve, Nélaton, and Tugel, favor the operasion. The latter publishes a successful case. Out of thirty-three other cases, sixteen successful ones are reported. The operator intends, by emptying the bowels, to gain time for natural healing, or at least for establishing a preternatural anus. Therefore a diagnosis of the specific character of the obstruction is not required.—*Virchow Jahrbuch.*

The Force of Uterine Contraction.—The extreme force of uterine contraction produces a pressure of 3,402 pounds per square inch, which is equivalent to a pressure of 54,106 pounds acting upon a circle of nine and a half inches in diameter, which is assumed as the average area of the pelvic canal. The maximum force used to expel the fœtus, by both uterine and abdominal muscles combined, is estimated by Soulin, by forceps experiments made on the dead body, at 110.23 pounds, a result which is regarded by Dr. Duncan as too large. Dr. Duncan considers 80 pounds as the maximum force ever employed in difficult cases. This would correspond with a hydrostatical pressure inside the uterus of 5.05 pounds per square inch, which is greater than the uterine muscles, unaided, are capable of producing.—*Dublin Quarterly Jour. Med. Sciences.*

An Experience Larger than Jenner's.—Dr. J. P. Loines, of New York, Vaccine Physician to the Chief Dispensary of that city, in bearing testimony to the immense service and complete harmlessness of vaccination, is able to refer to a public and authenticated experience for the past sixteen years in the vaccination and protection from small-pox, even in periods of epidemic and constant contact with the disease, of about 300,000 persons with humanized lymph from more than 40,000 infants. He has distributed more than 1,000,000 charges of vaccine lymph to about 3,000 different physicians. In no one instance has he received any complaint of injury or of failure of its product in true prophylaxis.—*British Med. Journal.*

Leprosy of the Bible, or Elaphantiasis Græcorum.—The earliest records of the Greek elephant disease in Great Britain are those of the Welch King, Hod Dha, in the year 950. It is said that King Henry IV., of England; Baldwin IV., King of Jerusalem; and King Robert the Bruce, died of it. India is the present great home for leprosy, and in some parts of it *one out of every sixteen people* is affected with leprosy. The first complete work on leprosy has been written by Drs. Danielssen and Poeck, of Norway.—*Ex.*

The Temperature in Phthisis.—The appendix of the recently published "Army Blue-Book" contains a paper by Assistant-Surgeon Boileau, M. B., Twenty-Ninth Regiment, on "The Correlations of Temperature, Pulse, and Respiration of Phthisis." The author says that the positive evidence of elevated temperature in a doubtful case of tuberculosis is of great value, while the absence of such elevated temperature is no proof that tuberculosis is not present. It is not even a proof, he asserts, that tubercularization is not in progress. After recording his observations, he proceeds to say in reference to one case:

"The above was a well-marked example of phthisis of five months' duration, in which the temperature was always low, frequently normal, while the pulse and respirations were very much accelerated. And with this case I will conclude my demonstration, that, fully recognizing the value of the thermometer to the clinical observer, it must be admitted that great care is demanded of us in the interpretation of the information it affords; and that, in phthisis especially, we must not be carried away with the idea that the thermometer will enable us positively to say, in a doubtful case, whether the patient is suffering from the disease or not."

One of our reasons for calling attention to this subject is the fact that the observations accord with the results of some of our own, and will probably agree with those of other observers. *London Lancet.*

Chloroform—Pro et Con.—Under this heading Professor N. R. Smith, of Baltimore, expresses the opinion in the "Baltimore Medical Journal," that while in surgical manipulations in which incisions and loss of blood are not involved, and hence no danger of pyæmia, as in the reduction of dislocations and in operations on the eye, for instance, which require the patient to be completely passive and non-resistant, and in the case of nervous and timid persons who would refuse surgical operations but for the confidence they place in chloroform, the use of the anæsthetic is highly advantageous, he asserts confidently, as the experience of half a century, that pyæmia or ichorræmia and

septicæmia after operations under chloroform, are more common than when it has not been employed. This he attributes both to the more frequent secondary hæmorrhage and to the morbid influence of the anæsthetic on the functions of the nervous system, and its influence upon the constitution of the blood.—*St. Louis Med. Archives*

Causation of Scarlatinous Nephritis. By Dr. Baginsky.—Dr. Baginsky has made numerous experiments on rabbits, to explain the occurrence of nephritis after scarlet fever. He suppressed the function of the skin, either by painting it over with varnish or by exciting a dermatitis by the use of croton oil. He is led to conclude that extensive inflammation of the cutis results in parenchymatous and interstitial nephritis. Thus, he thinks, many cases of scarlatinous nephritis must be ascribed, not directly to the blood poison, but to the accompanying dermatitis.—*Med. Times, from Med. Centralblatt*, July, 1870.

MEDICAL NEWS.

'Nulla dies sine linea."

The "Chicago Medical Journal" and "Chicago Medical Examiner" have both recommenced publication. These Journals, it will be remembered, were both seriously injured by the fire. The last-named Journal is now published as a Semi-Monthly. It presents a good appearance. Under the management of its accomplished, veteran editor, Dr. N. S. Davis, and his son, it has every prospect of success in its present form. That it may reap this early and abundantly, is the desire of all. The "Chicago Journal" is as sprightly and interesting as ever. Dr. Allen deserves much praise for his energy and for his devotion to this work. Both of these Journals are rewelcomed to the exchange list, and long may it be before they are again temporarily absent.———The illness of Dr. Lewis Sayre and his painful confinement have been learned with much regret. All sympathise

with him in his suffering, and will welcome him again to his field of arduous and useful labor; to his life of unquestioned energy and acknowledged success.———The members of the Profession will learn with great pleasure that Dr. R. J. Dunglison, the son of Dr. Robley Dunglison, will soon give circulation to a posthumous work of his father; the title of this work will be the "History of Medicine from the Earliest Ages to the Commencement of the Nineteenth Century." The work will be published by subscription, and will be issued by the well-known and popular House of Lindsay & Blakiston. It is safe to say that this work will be one of vast interest and value. The judgment, skill, scholarship, fidelity, and rare accomplishments of the author are sufficient to guarantee success. His son will, in the arrangement of the work, make this all that valuable material must be, when it represents the love of an accomplished editor for a profound and distinguished author.——Nearly 200 subscribers have been added to the subscription list since the closing weeks of the past year and the opening weeks of the new. Each mail brings some additions. The January edition has been entirely exhausted. Additional subscriptions will not be refused however (strange as this may seem) if they be made early. The friends of the Journal are actively at work, and there is a pleasing emulation among subscribers in making additions to the patrons of the work. Earnest thanks are returned for this welcome coöperation in the effort to establish a large medical journal in the Southern States. The ability and the spirit to do this are unquestionable. All really and deeply interested in this effort have but to act; not to think and feel only, but to act. This once fully done, the stigma that Southern physicians cannot sustain a medical journal is forever removed. Sentiment in this connection is worthless; action is the true test of feeling, and there is no one who cannot act.———The "Dublin Journal" is hereafter to be issued as a monthly. If the monthly be as valuable as the quarterly, its success will be deservedly great.———Kelly, Piet & Co., of Baltimore, offer to furnish the "London

Practitioner" and the "New Orleans Journal of Medicine" for one year for $7. This House must be the Gabriel of the publishing world. The last Journal has been dead for a year. ———Several American Medical Journals still continue the disgusting business of publishing commendatory letters sent to them. This charlatanism cannot be sufficiently rebuked. One almost imagines, when reading such matter, that he has, by mistake, taken up the almanac of some nostrum vender. Commendatory letters are very grateful and welcome to all editors, but they are certainly never sent to subserve the purpose of advertisements.———The Twenty-third Annual Session of the American Medical Association will be held in Philadelphia, May 7th, 1872, at 11 A. M. The fullest notices in detail have been sent to the Medical Press—this Journal excepted. Since the proceedings of the Association, including the election of the present President, have been properly reviewed in this Journal, the usual papers sent to the Press have never reached this office. Comment is unnecessary. The blow upon the Journal is, of course, terrific. The servants of that Body are recommended to read the suggestive story of that very small specimen of the male variety of the bovine species which undertook to dispute the progress of a railroad train. The story is an allegory, and they may profitably study it.——— The Kentucky State Medical Society meets in Louisville on the first Tuesday in April. The fullest attendance is desired.——— A Medical College (with Faculty complete) has been established at Wilmington, N. C.———The College of Physicians and Surgeons of Louisville, Ky., has been revived by the election of Dr. Lewis Rogers President.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

EDITORIAL BREVITIES.

All who desire to sell their January (1872) Journal, can

find a purchaser by sending this number to the Journal office. Seventy-five cents will be paid for each copy of said number. ———With the view of having perfect accuracy, it is requested that any errors in the addresses of the Journal sent, be indicated by letter. In the number of names to be written, it is almost impossible to avoid small errors in initials, surnames, and post-offices.———Any errors in receipts or bills sent out will be, it is hoped, promptly indicated as soon as observed. ———It is with deep regret that all will learn of the disappearance of the "Baltimore Medical Journal and Bulletin." These two Journals were consolidated a year since, but the increased strength thus obtained has been insufficient to prevent their disastrous failure. Thus twelve of the fifteen Journals established at the South, since the war, have perished. Comment is unnecessary. These Journals deserved success, but those among whom they were published would not give them support. In the meanwhile, thousands of dollars which would have sustained these Journals and made them an ornament and benefit to the Profession have been sent elsewhere. These Journals have not failed for the want of ability in their editors; those gentlemen worked hard and well, but their labors were not either appreciated or rewarded. Is present and future history to record the same ominous lesson which is recorded by the history of the past, that Southern physicians will not support their own journals? It is a melancholy record and the end is not yet. Others of these Journals are in the sere and yellow leaf (this is no pun); the frost of poverty and adversity has touched them, or the soil in which they have been planted affords no proper nutriment. They need support, and should have it quickly and generously.———The valuable article on Transfusion, its history and statistics, published in the January (1872) number of this Journal, was first published in the "National Medical Journal."———The Divided Medicine Company of Cincinnati have sent the editor a very handsome pocket-dispensary, filled with their medicines. The dispensary is of fine morocco, and finished in a very complete and efficient

manner. The medicines (comprising almost all of the standard medicines) are incorporated in gelatine sheets, and these sheets are divided into squares—each square measures a half inch, and contains the physiological dose of the medicine incorporated. With this pocket-dispensary, weighing not more than a few ounces, and resembling a large pocket-book, the physician is ready for active practice, his doses being already prepared for instant administration. The preparations and doses are said to be accurate and reliable. They will be duly tried, and the result will be made known.———The excellent paper from Dr. Mastin, of Mobile, is published in this number of the Journal by the special request of the editor. Though the article was prepared at the special request of the Alabama State Medical Association, it was excluded from the Transactions, because the Publishing Committee believed that the speeches (never so delivered) of Drs. Cochran and Ketchum on the subject of the Mobile Medical College, were of greater scientific and professional interest. It is stated in the Transactions, that Dr. Mastin's valuable article, prepared by request of the Association, was excluded because he was not a member of that body, and because the Committee had not sufficient funds; yet they were amply prepared in money for publishing their own speeches; the paper of their invited guest being (hospitably) excluded; and yet, in the previous year, the papers of those not members of the Association, were published by the Chairman of the then Publishing Committee. Comment is unnecessary. Dr. Mastin is opposed to the manner in which the Medical College of the State of Alabama (largely the offspring of the State) is being administered. This offense, (?) however, is not sufficient to deny his valuable paper proper scientific recognition and circulation. It is a valuable paper, and all who read it will be inexpressibly surprised that a paper of this kind should be suppressed by a Publishing Committee, while their own "speeches," (never thus delivered), are fully and *exhaustingly* published.

Scientific Coincidences.—In the literary world there are

startling coincidences indeed: Coleridge's Mariner, Campbell's Last Man, Byron's Ode to Darkness, set forth miraculously the same visions and views; literature is full of these coincidences. But one of the most remarkable coincidences on record occurs in the Journal for January, 1872, on page 69. On that page the reader will observe an article on "Puerperal Ovaritis," by Dr. J. A. Octerlony; yet, Dr. S. C. Thornton, of Moorestown, New Jersey, writes to say that he had written an article similar to this, in the minutest particulars, and had sent it for publication. No coincidence in scientific or secular literature can compare with this one. All coincidences, however, can usually be explained. Coleridge, Campbell, and Byron, after a memorable discussion, separated; the Mariner, the Last Man, and the Ode to Darkness were the result of that conversation, and the conversation explains fully the coincidence in their conceptions, figures, and expressions. The explanation of the recent coincidence is even more simple—Dr. Thornton and Dr. Octerlony each sent papers for publication, and as is so often the case, neither writer appended his name. Dr. Thornton claims, very justly, his article. Due care will be taken to give Dr. Octerlony's article proper paternity.

An Opening.—Very many letters are being received from physicians, old and young, asking for aid in securing "an opening." The experience of the writer is, that this great desideratum, "an opening," is the professional philosopher's stone; it is the dangerous ignis fatuus of the professional field; ever attractive, ever seductive, ever receding; never reached; never realized. No rapt enthusiast ever sought with more untiring energy the fabled vistas of the Black Forest than does a large portion of the Profession seek that most intangible of all myths, the professional "opening." If one can only secure shelter and bread, he had best remain where he is. These migrations are very dangerous to the physician. Among his old familiar friends, he is well known, trusted, frequently honored. His character is beyond the shaft of secret and insidious calumny; if pecuniarily tried, he is at least morally at

rest. Should he move, however, the picture is soon and wonderfully changed. In his new home, if he be content to be the sycophant and satellite, to yield all that a man should value under the pressure of a few, whom the strange, strengthless web of circumstances holds temporarily and prominently upward, as does the cobweb sustain the intrusive but valueless insect, he may live in prosperity, if not in respected peace; but if he is not willing, as said the Danish Prince, "to crook the pregnant (ready) hinges of the knee where thrift may follow fawning"; if he prefers always to form his own opinions, to assert and defend them; to illustrate in acts what Count Dumas conveyed in words, that "there are blows to give as well as blows to receive," the change of residence brings the immigrant to no bed of roses; and though he may prefer in his new home his life of hard toil, of personal and professional independence, a life of declared and unchanging hostility to the corrupt charlatans and plausible impostors at work in the same field, it must be admitted that this is not what those who wish to leave their homes would regard as "an opening." Yet such a life has its rewards; the reward of friendship from men true, noble, and strong; of fair success; of a fair future without the forfeiture of personal or professional respect. All who leave home and seek "an opening," can find one such as has been described, if this be what is termed "an opening;" or they can, by a contrary course, secure what some term an opening, and some term a closing in one's career. These openings (so termed) are, however, all expensive; honorable rewards in their mystic recesses are obtained only by the severest toil and trials; while the dishonorable rewards, though easily attained, are grasped at the expense of character and truth. The true "opening" for the physician is most easily made where he is best known—at home. It is made as the farmer makes his in the forest—by felling obstacles; by hard work in preparing for the crop; by obtaining the best seed—by putting this in carefully, and by working it honestly and patiently. Such means usually secure success at home; they constitute the price of success elsewhere.

This may be an unsatisfactory reply to the letters received. It has at least the merits of sincerity and truth.

"A Special Offer for 1872" has been made to many canvassers for this Journal through many of the subscribers. Whoever holds such an "offer" is a *canvasser* for the Journal, and not an *agent*. No one outside of the Journal office is authorized to give receipts for subscription or advertisement bills paid. Those who are already subscribers to the Journal should therefore make payment to the editor and proprietor only. No one holding a "Special Offer for 1872" has the right to receive money from those who are already subscribers to the Journal; and all receipts given for money so received are valueless. "The Special Offer" is only made for the purpose of obtaining *new* subscribers. A liberal commission is paid for this purpose. No commission whatever will be allowed on any sums obtained from old subscribers; and old subscribers (those who have been subscribers for a year or more) are particularly notified to make payment only to the editor; receipts given to them by any one else are unauthorized and valueless. This rule is not intended to censure or discredit in any manner those who are obtaining subscriptions and advertisements; for they are all reliable; but it is done to avoid those endless errors which occur in the Journal account-books, when accounts and receipts are issued from more than a single office. Money should be sent by check, bill-of-exchange, post-office money-order, "express," or in a registered letter. Sums thus sent are at the risk of the Journal. Money enclosed in an unregistered letter is, of course, sent at the risk of the subscriber. Letters should be addressed to Dr. E. S. Gaillard, Louisville, Ky. It is unnecessary to give the local address, as this is well known at the post-office.

THE RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—PERICARDIAL EFFUSION. By T. P. SATTERWHITE, M. D., Louisville, Ky. [Read before the Louisville Medico-Chirurgical Society.]

This remarkable case of effusion followed phlegmonous erysipelas of the face in a young man about nineteen years of age. From all that could be learned, he had never had rheumatism, nor suffered from any cardiac trouble previously; and it was only within six or seven weeks of his death, and after all erysipelatous inflammation had subsided, that symptoms of heart disease manifested themselves. I regret very much that I cannot give a complete history of the progress of the case; but the patient's situation was such that he could not be visited as often as was desirable. I will therefore simply mention some of the most prominent symptoms, and state the result of the autopsy which I held, assisted by Professor J. A. Octerlony and Dr. Grievs, in the presence of the relatives of the deceased.

The heart's action seemed to be very little, if at all impeded; the pulse was full and regular, and there was no tendency to syncope; there was some distress of countenance, with general lividity of the surface and slight œdema of the lower extremi-

ties. The apex-beat of the heart could not be felt, and the precordial dullness was very extensive. His general strength remained good to the very last; up to a short time before his death he could walk about his room with comfort.

An examination post-mortem showed great precordial bulging, and very considerable prominence of the abdomen from depression of the diaphragm; on elevating the sternum nearly the whole of the thorax was occupied by the pericardium; the left lung was crowded up between the second and third intercostal spaces; the right lung was nearly hidden from view, and greatly compressed; on opening the pericardium, which was done by a small puncture, a Davidson's syringe was inserted, and the contents pumped into a vessel, the fluid, upon being weighed, amounting to eight pounds and four ounces. There were six or eight ounces of lymph, and the remainder liquid. A dense coating of lymph was found covering the whole inner surface of the pericardial sac. The heart was of normal size, and appeared healthy; it had a considerable amount of lymph adhereing to it externally, especially on its left ventricle. Neither the lymph in the pericardial sac nor on the heart was scraped off and weighed. The mode of death seemed to be gradual exhaustion from apnœa.

The following is a record of some cases of pericardial effusion, kindly furnished me by Dr. J. D. Jackson, of Danville, Ky., and Dr. F. C. Wilson, of this city, with several that I was able to collect from my library:

In answer to my note, Dr. Jackson responds as follows: 'I last night waded through forty-six volumes of the "Edinburgh Medical and Surgical Journal," and to-day have searched the index to the volumes of the "Medico-Chirurgical Transactions" from 1805 to 1864, the "Dictionaire de Medicine," twenty-seven volumes; "Fabre's Bibliothique de Medicine," fifteen volumes; together with Morgagne's works, and Von Sweiten's, and some twenty-odd volumes of the "London Lancet," besides several of the more recent standard text-books; and despite all, have but a very meagre showing for my labor. I have not taken

down the cases in which the amount was less than six ounces, which Corvisart looked upon as not being much above normal, though disputed by others, however.' I subjoin the result:

Vieussens collected two pints, and in one very severe case observed by Corvisart, there was extracted eight pounds of serum from the cavity of the pericardium. P. Rayer, Dictionaire de Medicine.

In one observation reported by M. Saussier, it was as much as two bottles. In M. Louis's Memoirs, the quantity of liquid has been calculated to be four pounds in one case reported by Corvisart; the pericardium contained nearly two pints of seropurulent liquid. Bouillaud, Trait. Clinique des Maladies du Coeur., vol. i., p. 489, in Fabre's Bibliothique de Medicine, Art. Pericarditès. In a patient dying of pericarditis, on dissection, four and twenty ounces of liquid were contained in the pericardium. M. Groufoct, "Edin. Med. and Surg. Journal," July, 1809.

A little to the right of the sternum there extended from the lower part of the left side a dirty, chocolate-colored bag, which, on being opened, proved to be the pericardium, adhereing to the lungs, thickened and much distended; also containing two pounds and six ounces of perfectly formed pus. Dr. Andrew Duncan, "Edin. Med. and Surg. Journal," January, 1866.

The pericardium contained twelve ounces of serous fluid. Dr. Lucius O'Brien, "Edin. Med. and Surg. Journal."

The quantity of purulent matter thrown out in chronic pericarditis is sometimes astonishingly great. In the case of a colored man, thirty years old, mentioned by Dr. Wright, an eminent physician of Baltimore, the quantity is said to have exceeded a gallon, exhibiting all the qualities of laudable pus. Quoted by Professor Gross, Path. Anat., vol. ii., from Am. Jour. Med. Sci., vol. xii., p. 33.

In the "Medical Times and Gazette," November 3d, 1866, is a case recorded in which M. Wheelhouse tapped the pericardium of a patient, drawing off between two and three ounces of serum—the patient recovering.

In the "Lancet" for September, 1869, another case, recorded by Dr. Albert, in which M. Teale tapped the pericardium, removing five ounces of serum, the next day six ounces—the patient dying that night.

Summer before last, assisted by Drs. Stockton and Warren, I held a post-mortem on a negro who died of pericarditis, accompanying rheumatism. Probably a pint of blood-colored serum was withdrawn. What was very remarkable in the case was the thick stratum of lymph or fibrin covering the whole heart, sections through the walls of the organ showed the coating of the ventricles to be actually as thick as the muscular structure itself. The plastic material enveloping it was not smooth, but villous, or very much like the inside of the stomach of the ox, corresponding quite nearly in general appearance to the figure in Gross's Path. Anat.

From Wood's Practice, Fifth Edition, vol. ii., p. 144, a case mentioned by Dr. Frank in which six pounds of liquid was found in the pericardium; also one recorded by Walshe, sixty ounces.

From Braithwaite, R. B. Todd, F. R. S., reported a case of pericardial effusion accompanying rheumatism and pneumonia, fourteen ounces of bloody serum.

Tanner's Practice relates a case of M. Arans, of Paris, man 23 years of age, had twenty-three ounces drawn off, and a reäccumulation of forty-nine ounces.

NEW YORK.

Dear Sir,—A case in which the contents of the pericardial sac probably exceeded the amount in your case is reported in the Lectures on Diseases of the Chest, by the late Dr. Suett, I have referred to it in my work on Diseases of the Heart, Second Edition, p. 406. Your case will be valuable to place on record, and I hope you will report it. Very truly yours,

A. FLINT,

50 E. Thirty-fourth street.

In referring to Prof. Flint's work, he says: "Perhaps the most remarkable case of large accumulation on record was observed

by Professor Alonzo Clark, and reported by the late Dr. Suett. Death occurred in ten weeks from the date of the attack, and on examination, post-mortem, the pericardium was found to occupy the whole anterior part of the chest, and had the entire contents of the pericardial sac been fluid, it could not have been less than ten pints; but as it was, there was at least a gallon of clear yellow serum.

"The specimen which I removed is now in the possession of Professor Flint, having presented it to him from motives of high esteem."

ART II.—EXCISION OF FOUR INCHES OF FEMUR, WITH DESCENDING RAMUS. By JOSEPH W. THOMPSON, M. D., Paducah, Ky.

John G. Dunbin, of Hamburg, Tenn., aged 30, a private in Company I, Ninth Alabama Infantry, Confederate Army, was wounded at Gettysburg, Penn., on the 3d day of July, 1863, by a grapeshot. Ball entered the left hip a little obliquely, behind, passed through the joint, and came out through the perineum, about midway between the anus and scrotum, as indicated by cicatrices, in those situations, laying open the urethra in its passage, and lodged against the opposite thigh. Recovery is perfect. Limb is four inches and three-quarters shorter than its fellow, as measured from anterior superior-spinous process of ilium to patella; motions of the limb are free in all directions, except abduction, in which it is slightly restricted. Can walk four or five miles without crutch or stick, and with very little inconvenience. Suffers some from riding on horseback. Has had no abscess since about three years ago, when the superior (iliac) portion of the rim of the acetabulum sloughed off. The muscles are slightly atrophied, but regaining strength constantly. The limb preserves its natural position without any inclination to rotate inward or outward. The deformity is scarcely noticeable, except the shortening of

the thigh and the cicatrix on the outer side. The history of the case, as given by Mr. Dunbin himself, is as follows: He was wounded about 2 o'clock P. M. on the 3d of July, and lay where he fell until about dark on the 5th (53 or 54 hours), without any attention, except that a Federal soldier threw a blanket over him and gave him a drink of water about half an hour after he fell. On the evening of the 5th, he was moved half a mile out into the woods, where he lay on the ground fifteen days more. Here he was supplied with water, but had no food that he could eat, except some preserved fruit and wine furnished him, on the fifth day after he was carried there, by a young lady of the neighborhood. It rained on him, more or less, every day, and sometimes, in the intervals between showers, the sun would beam down on him with intense heat. On the seventeenth day after he was wounded, he was removed to Baltimore, remained in the yard of the West Building Hospital one day and night, and was then removed on a steamer to Chester, Pa., where the wound, now full of maggots, was dressed for the first time by Dr. Comfort. After his arrival there, he received every attention and kindness that could be bestowed by surgeons and nurses. Three or four days after his arrival there, Surgeon Fisher, of Philadelphia, in charge of the hospital, resected four inches of the femur, and removed all of the ischium, with the descending ramus of the pubes. The absence of these parts is apparent now on examination. He was confined to bed for twelve months; urine passed through the wound for six or seven months; and for three months after he got up, the limb inclined to rotate inward, but was controllable by the muscles. The rectum and the urinary organs now perform their functions perfectly, and his general health is perfect.

NOTE.—The notes of this case were sent to Dr. Thompson by Dr. J. M. Taylor, of Corinth, Miss.—ED.

ART. III.—A SINGULAR CASE. By THOMAS HILL, M. D., Danville, Mo.

February 9th, 1872, at 12 M., I was called to see Mrs. M., in labor with her fifth child. Healthy; found vertex presenting in first position; mouth of womb dilated to size of a half-dollar; soft and dilatable. The pains being light, and no advance making, no necessity existing for hurry; determined to let Nature work her own way. At 6 A. M. pains harder, but soon relapsed to former condition. At 8 A. M. gave 6 grs. quinine, hoping to give more activity to the womb. At 9 o'clock active labor began; waters broke at 10; at 11:15 delivered of a fine, healthy girl. Little or no exhaustion, and she soon rallied: waited half hour, and the placenta not being expelled, removed it carefully from vagina, where it had lodged. The womb contracted firmly, somewhat larger than natural, but not enough so to excite apprehension. Little or no hæmorrhage. In half hour, on placing hand on abdomen, found the womb still firmly contracted. Mrs. M. stated that she believed there was some blood coming from her; examined, and found slight hæmorrhage; pressed gently the lower part of abdomen, and showed her how to kneed it with her hand if she felt any more flow. At 1 P. M. the nurse called me, and said Mrs. M. was very sick at the stomach, and complains of being blind. I at once saw there was violent hæmorrhage, and ordered a handfull of snow to be brought me, which I immediately applied. Singular, though so much hæmorrhage, the womb was contracted as hard as it could be, apparently about the size of a large fist. Thinking there must be something there which ought to come away, I then grasped it as recommended by Dr. T. Parvin by what he calls Criel's method (in a late number of the Journal), and pressing downward and backward, soon found that whatever it contained had been expelled into the vagina. The womb then being contracted to its proper size, and no more hæmorrhage, I left her to rest before removing it. In fifteen minutes she expressed a desire to make water and have an evacuation from her bowels; and having had a

folded cloth put under her, did allow her to get up. After she had finished, she remarked that something hard had come from her. On superficial examination, found what I supposed to be a portion of the placenta. On reflection, I knew that the placenta was entire which I had removed, and therefore concluded to make a more careful examination, when I found a mass composed of a placenta and membranes (unfortunately, in my first examination, I had torn the membranes), in an almost natural condition, weighing about five ounces. In the centre of the placenta was the rudiment of a cord about one and a half inches long, but no appearance of a fœtus. Could this have been a true conception, or blighted in early pregnancy, and the placenta not thrown off? Where then was the fœtus? The placenta evidently being as large as at five months.

Believing that this is a unique case, I send it to you. Unfortunately, I could not obtain the placenta for preservation.

ART. IV.—NEW MODE OF REDUCING DISLOCATION OF THE SHOULDER. By ALBERT FAIRFAX, M. D., Fairfax C. H., Va.

For some time past I have used the following mode of reducing dislocation of the shoulder: The patient is seated on a low stool or cushion, an assistant, from the sound side, passes his arms in front and behind, grasps each end of a short stick wrapped with a towel, which he presses firmly into the axilla to serve as a fulcrum, at the same time he is enabled to hold the patient firmly in position. The injured limb is taken by the elbow and extended, first directly upwards, then brought quickly downwards and a little forwards (the latter more particularly, if the dislocation is under the pectoral muscle), when the head of the bone will fly in place with its characteristic snap.

This feature has some advantages, I think, from the ease with which it can be carried out, both to the patient and sur-

geon; especially as it often happens in the country, we have to do without the use of chloroform. I am certain that any one giving it a trial will prefer it to that usually adopted of reducing by the heel in the axilla.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—PEPSIN—A NEW, PRACTICAL, AND RELIABLE METHOD TO PREPARE IT; ITS PROPERTIES AND DIGESTIVE STRENGTH. By E. SCHEFFER, Louisville, Ky.

When publishing my paper upon Saccharated Pepsin (Amer. Jour. of Pharm., Jan., 1871) my intention was to continue the experiments, then only hinted at, and to publish the results. I have since made a large number of experiments, some of which I deem of sufficient importance to be made known, although my researches are not finished.

The various methods for the preparation of Pepsin, as given by different authors, seem to be intended mainly for the purpose of experiments, and are so complicated that the difference in the properties characterizing the products is readily accounted for. The student of physiology may not shun the trouble attending these processes, but the manufacturer could not possibly resort to them, even if he was so inclined, and no doubt wished for a more simple and practical method.

The author of Leop. Gmelin's Hand-book of Chemistry, in the last volume of the work (issued in 1870) says, under the head of Pepsin: "*The Pepsin of commerce is either mucus of the stomach, scraped off and dried, or a mixture of Pepsin, Peptons and Starch, containing a little lactic acid.*" In what way these commercial pepsins were prepared, it is difficult to say, as most manufacturers have their own way, and keep it a secret; but in Europe, as well as in this country, most of these prepara-

tions died almost as soon as they were brought into existence, as they did not come up to what they were represented to be.

In the summer of 1870, while working on and experimenting with *Liquid Pepsin* (Amer. Journal of Pharm., March, 1870,) and at the same time trying to improve it, I discovered some tests which I considered useful in the preparation of dry pepsin. Before this I had wished to prepare pepsin in the dry state, but was not inclined to follow the tedious and, in some way, uncertain processes usually given.

Following up the hint received by certain tests with a number of experiments, I succeeded at last in obtaining a very satisfactory product.

The action of saturated solutions of some of the neutral salts of the alkalies on different protein substances induced me to try their effect on pepsin. For this purpose I prepared an extraction of the mucous membrane of fresh hogs' stomachs with water, acidulated with muriatic acid, which, after repeated filtrations, formed an opalescent yellowish liquid. Equal volumes of this liquid and of a saturated solution of sulphate of soda, when well mixed together, formed a precipitate, which was collected on a filter, pressed and dried; a very small quantity of it, dissolved in water with the aid of a few drops of hydrochloric acid, dissolved coägulated albumen. Other saturated saline solutions were now experimented with, viz., of sulphate of magnesia and chloride of sodium, and also a solution of chloride of calcium of 1.27 spec. grav.

By these solutions precipitates were likewise found to form, possessing properties identical with that obtained by sulphate of soda, but I finally decided to employ chloride of sodium as the precipitant, as by a comparative test, which of the four different salts would produce the most precipitate, the proportion was: chloride of sodium 4, sulphate of magnesia $3\frac{1}{2}$, sulphate of soda 2, chloride of calcium 1, so that chloride of sodium gave twice as much precipitate as sulphate of soda, and four times as much as chloride of calcium. But besides the larger yield, the sodium chloride has the preference for its antiseptic

properties. A part of the precipitate, formed by the sulphate of magnesia and allowed to remain in the liquid, had a putrid odor after the third day, while a moist precipitate, formed by chloride of sodium and set aside purposely for experiments, proved to be good after six months.

Preparation of Pepsin.—On this basis I now began to prepare pepsin. Of the well cleaned fresh hog stomach the mucous membrane is dissected off, chopped finely, and macerated in water, acidulated with muriatic acid for several days, during which time the mass is frequently well stirred. The resulting liquid, after being strained, is, if not clear, set aside for at least twenty-four hours, in order to allow the mucus to settle. To the clarified liquid the same bulk of a saturated solution of sodium chloride is added, and the whole thoroughly mixed. After several hours the pepsin, which by the addition of chloride of sodium has separated from its solution, is found floating on the surface, from whence it is removed with a spoon and put upon cotton cloth to drain; finally, it is submitted to strong pressure to free it as much as possible from the salt solution.

The pepsin, when taken from the press and allowed to become air-dry, is a very tough substance, and presents, according to thickness, a different appearance, resembling in thin sheets parchment paper, and in thick layers sole leather; its color varies from a dim straw-yellow to a brownish yellow. Besides a little mucus, it contains a small quantity of phosphate of lime and chloride of sodium, which, however, do not interfere with its digestive properties, as they are found also in normnl gastric juice.

Saccharated Pepsin.—To work it into Saccharated Pepsin (Amer. Jour. of Pharm., January, 1871,) the damp pepsin, as it is taken from the press, is triturated with a weighed quantity of sugar of milk to a fine powder, which, when having become air-dry, is weighed again, the quantity of milk-sugar subtracted, and so the amount of pepsin found. The strength of this dry pepsin is now ascertained by finding how much coägulated albumen it will dissolve at a temperature of 100° F. in five or six

hours, and after this, sufficient milk-sugar is added to result in a preparation of which ten grains will dissolve one hundred and twenty grains of coägulated albumen, and this preparation I have called *Saccharated Pepsin.*

Purification of Pepsin.—Anxious to get the pepsin in its purest state, if possible, chemically pure, I tried different methods, but have not succeeded as yet. In order to get a purer article, I re-dissolve the pepsin, as obtained after expression, in acidulated water, filter the solution through paper, and precipitate again with a solution of sodium chloride; the precipitate, after draining and pressing, is now free of phosphate of lime and mucus, but contains yet salt. In the freshly-precipitated state the pepsin is very readily soluble in water, and cannot, therefore, be freed from adhereing salt by washing.

By allowing the pressed sheet of pepsin to get perfectly air-dry—whereby it becomes coated with a white film and small crystals of chloride of sodium—and by immersing it then in pure water for a short time, the greater part of sodium chloride can be extracted, but it has to be done very rapidly, as the pepsin swells up considerably and loses its tenacity. By operating in this manner, I obtained a pepsin which dissolves in acidulated water to quite a clear, colorless liquid, but as it still contains traces of salt, I preferred to call it *Purified Pepsin.*

I obtained a pepsin quite free of chloride of sodium—which by combustion did not leave any ashes—by swelling purified pepsin in water to a thick mucilaginous liquid and mixing it with alcohol of 95 per cent. A gelatinous almost transparent precipitate is formed, which is put on a cloth, washed with diluted alcohol, then pressed and dried. This preparation did not leave any ashes by combustion, but I was greatly disappointed in my expectation, when I found that the digestive strength of this pure pepsin was not as great as that of the purified pepsin, which still contains sodium chloride. No doubt the use of alcohol had impaired the digestive power of the pepsin to some extent.

Properties of Pepsin.—The pepsin is, as already mentioned,

very soluble in water, when recently precipitated, but when once air-dry, dissolves but slowly and in very small quantities in water.

The dry purified pepsin, when put into water, swells up considerably, becomes perfectly white, and, when vigorously shaken, disintegrates to small floccules, which swim in the liquid and remain suspended for a long time, while a very small quantity will dissolve.

The watery solution has an almost neutral reäction, is coägulated by boiling, and gives with alcohol a transparent, gelatinous precipitate.

With sulphate of copper it remains clear at first, but after several hours becomes turbid.

Bi-chloride of mercury gives immediately a white precipitate.

With tannin a very copious white precipitate is obtained.

Nitrate of lead forms a white precipitate.

The precipitate, formed by chloride of sodium, is very characteristic and at the same time very interesting. When a saturated solution of chloride of sodium is added to a clear solution of pepsin, not too concentrated, at first a jelly-like transparent coägulation is formed, which disappears upon stirring, and the liquid acquires a slightly opalescent appearance; after a short time it becomes more turbid, and small flakes are noticed floating in it, which soon will form into small transparent globules, and as such rise to the surface. When the quantity of pepsin in a liquid is very small, the opalescence and turbidity are hardly noticed, but after some time the small globules will appear on the surface.

The watery solution of pepsin decomposes readily; after a few days small flakes separate from the clear solution, which increase in number by longer standing, and on the fourth day already it emits a foul disagreeable odor.

The watery solution of pepsin shows very little action on coägulated albumen; a certain quantity of albumen, which, by a watery solution, was hardly acted upon in twenty-hours, was readily dissolved, after addition of a few drops of hydrochloric

acid. A watery extraction of the mucous membrane was also experimented with, with the same result; before the addition of hydrochloric acid, it did not dissolve albumen; after acidulating it the albumen dissolved easily.

Properties of Acidulated Pepsin.—An acidulated solution of pepsin was made of such strength that one fluid-ounce contained one grain of purified pepsin and two drops of hydrochloric acid, and experimented with.

By boiling, the clear liquid becomes turbid, and, upon cooling, deposits flakes.

By addition of alcohol it remains clear at first, but upon standing, flakes of pepsin separate from it.

Strong hydrochloric acid produces slight turbidity, which disappears by addition of more acid or by dilution with water.

Chloride of sodium gives the characteristic precipitate.

Bi-chloride of mercury produces opalescence.

Tannin forms a heavy precipitate, soluble in hydrochloric acid.

Gallic acid shows no action.

Carbonate and bi-carbonate of soda produce a precipitate soluble in excess.

Modified Pepsin.—A solution of carbonate of soda carefully added to a solution of pepsin produces a precipitate which, upon being separated from the liquid, will prove to be pepsin; but a little more of carbonate of soda will re-dissolve it again, and the liquid no longer contains pepsin; that is, the pepsin is destroyed or modified.

This circumstance caused me to say in my essay (Amer. Jour. of Phar., 1871, p. 6), "*dry pepsin, precipitated with alcohol from its solution, did not act at all on albumen,*" which remark I herewith revoke as erroneous. The fact was that, intending to make pure pepsin and not getting a precipitate by alcohol in the sour solution, I added carbonate of soda to neutralize the acid, and then obtained by alcohol a precipitate which I believed to be pure pepsin; at that time I had not studied the change which carbonate of soda produces in pepsin.

When I say, above, the pepsin is destroyed, I mean its action on fresh coägulated albumen. A pepsin solution, made entirely neutral, or rather a little alkaline by addition of carbonate of soda, which afterwards is acidulated again with hydrochloric acid, has lost its power to dissolve fresh coägulated albumen.

The alkaline solution assumes a foul odor after a short time; it does not act on fresh coägulated albumen, except when purification sets in, and then the more putrid the solution becomes, the more it seems to act on albumen; at the same time the most natural odor of healthy human fæces will show itself.

But, on the other hand, the alkaline solution, by itself as well as when acidulated, dissolves *partly digested* albumen.

Coägulated albumen, put into pepsin solution until half gone, then taken out on a cloth and washed and put into an alkaline pepsin solution, will dissolve; it will likewise dissolve in an alkaline solution which has been again acidulated by the addition of hydrochloric acid. But these solutions have a different appearance from a solution by pepsin; they are not as clear and thin a liquid as the latter.

An alkaline (modified) pepsin solution does not get precipitated by chloride of sodium, but by addition of hydrochloric acid immediately a copious gelatinous precipitate will be formed.

Digestive Power of Pepsin.—In my former experiments the strength of pepsin was ascertained by allowing its solution at a certain temperature to act upon a convenient quantity of coägulated albumen for a given time, and determining the quantity dissolved by weighing that undissolved; the albumen, by this method, was only partially dissolved. In my recent experiments I determined the strength by ascertaining the amount of albumen that would be fully dissolved in a certain time and at a given temperature. I had found that the solvent power of pepsin is not inverse proportional to the time; for if a pepsin dissolves X albumen in S time, $2a$ pepsin will not dissolve X albumen in $\frac{s}{2}$ time, as might be supposed, but require longer time. The last portion of coägulated albumen to be dissolved in an

experiment requires much longer time in proportion, even when epsin is in excess.

Having used heretofore, in my experiments with pepsin, 10 drops of hydrochloric acid to the fluid ounce of water, I wished to determine whether or not a smaller quantity of acid would answer the same purpose. It was of importance to ascertain if, by the preparation of *liquid pepsin* a smaller quantity of acid would produce the same results, as some complaints were made of the acidity of that preparation as first prepared.

Of four experiments, in which a certain quantity of pepsin was dissolved in 1 ounce of water with respectively 4, 6, 8, and 10 drops of hydrochloric acid of 1.17 spec. grav., the same amount of coägulated albumen was dissolved in the shortest time where 6 drops, then where 8 drops, and thirdly, where 10 drops of acid were employed, while the experiment containing 4 drops of acid had, after 6 hours, a considerable quantity of albumen not dissolved. I, therefore, made all my subsequent experiments with a solution containing 6 drops of hydrochloric acid to the fluid ounce of water, at a temperature of 100 to 105° F., and each vial was shaken about every 10 minutes.

One grain of purified pepsin in four ounces of acidulated water was found to dissolve 400 grains of coägulated albumen in eighteen hours at 75° F.

One grain of purified pepsin in four ounces of acidulated water dissolves 500 grains of coägulated albumen at a temperature of 105° F. in six hours.

Ten (10) grains of saccharated pepsin dissolves 120 grains of coägulated albumen in four to six hours at 100° F.

Although I did not succeed in preparing a pepsin like Wasman's, of which one part was capable of dissolving 60,000 parts of coägulated albumen, I found that the digestive power of pepsin was almost inexhaustible.

With one-half grain of purified pepsin in two ounces of acidulated water, I dissolved 250 grains of coägulated albumen; to the solution was added another ounce of acidulated water and 250 grains of albumen; when it was again dissolved, I

added in these fractional proportions of acidulated water and albumen, until finally one-half had dissolved 1,500 grains of coägulated albumen. That it would have dissolved still more, I proved in an experiment, mentioned hereafter.

Pepton Solution.—When the albumen, which, by the digestive process is converted into albuminose or pepton, is perfectly dissolved, the resulting pepton solution is a very limpid, thin, slightly yellowish-colored liquid, which, when filtered, has an opalescent appearance.

By the addition of alcohol it remains at first clear, but forms after twenty-four hours a gelatinous precipitate.

Pepton Precipitate.—An equal volume of saturated salt solution added to the pepton solution produces a copious, perfectly white precipitate, which, upon being collected on a filter, drained, pressed, and dried, yields a hard white substance containing pepsin, peptons, chloride of sodium, and a little acid. Put into water, it becomes translucent, like horn, and dissolves after some time.

Its solution has an acid reäction; is not coägulated by heat; hydrochloric acid produces a heavy precipitate, which, by dilution with water or by addition of more acid, will redissolve; with alcohol it becomes opalescent, and forms after some time a precipitate.

Bichloride of mercury gives a heavy, white precipitate.

Coägulated albumen put into the watery solution is hardly acted upon, but when acidulated with hydrochloric acid it is dissolved.

Digestive Power of the Pepton Precipitate.—The digestive power of the precipitate, obtained by addition of sodium chloride to the pepton solution is remarkable. In many cases a solution of one grain of the precipitate in one ounce of acidulated water dissolved 100 grains of coägulated albumen.

With twenty grains of saccharated pepsin in two ounces of acidulated water I dissolved 240 grains of coägulated albumen; the precipitate obtained from this solution by chloride of sodium weighed, when dry, 12 grains, of which one grain dis-

solved 100 grains of coägulated albumen; from this last solution again, by chloride of sodium, 10 grains of precipitate were obtained, of which one grain dissolved between 20 and 30 grains of coägulated albumen. In this way the 20 grains of saccharated pepsin, for which I only claim the power to dissolve 240 grains of albumen in six hours, dissolved at the rate of between 4,000 and 5,000 grains.

The solution of 1,500 grains of albumen, obtained by fractional addition of albumen and acidulated water to an acidulated solution of half a grain of purified pepsin, mentioned above, furnished with chloride of sodium a precipitate which also had considerable digestive power.

Relation of Chloride of Sodium to the Digestive Power of Pepsin.—By its preparation the commercial saccharated pepsin contains always a small quantity of chloride of sodium; in my experiment, to obtain a pure pepsin free of sodium chloride, I succeeded by using alcohol, but the resulting product had less digestive power than purified pepsin, which still contains salt. It was, therefore, interesting to determine if chloride of sodium would aid the action of pepsin on albumen and accelerate its solution.

A very small quantity of salt, a quantity that does not exceed much that of the purified pepsin, does not interfere with, on the contrary, benefits the pepsin in its action; but a larger quantity, although very small in itself, retards the solvent power.

While half a grain of the pure pepsin in two ounces of acidulated water dissolved 200 grains of coägulated albumen perfectly, a great deal of albumen was left undissolved in the same time when 5 grains of salt were added to it, while by ten grains of salt a portion of the albumen was not dissolved after three days.

Stability of Pepsin.—As watery solutions of pepsin decompose very soon, particularly in warm weather, it was of interest to determine the stability of acidulated solutions; accordingly, solutions containing one grain of purified pepsin to the fluid

ounce of water, and respectively 2, 4, 6, 8, and 10 drops of hydrochloric acid were set aside, a portion of each in well-corked vials, and another portion in vials only tied up with paper. The solutions containing 2 drops of acid became mouldy after the first and second week, while in vials, with four drops of acid, I noticed mould after five weeks. The other solutions kept entirely clear, and when examined, after 6 months, they did not have any bad odor, but had lost their digestive power almost entirely; albumen, put into several of the solutions, was hardly acted upon, and chloride of sodium did not produce the characteristic precipitate.

To 20 grs. purified pepsin, swelled in 2 ounces of water, were added 10 drops of hydrochloric acid, which dissolved the pepsin fully and formed a liquid of a slight yellowish color, and the consistence of the officinal mucilage of gum arabic. Put aside in a beaker-glass, tied up with blotting paper, it evaporated slowly, and was, after 6 weeks, dried out to a transparent gum, which felt sticky to the touch. Examined after several months, it dissolved readily in water, forming a clear solution of sour reäction and taste, which had no bad odor, but acidulated and diluted to the strength usually employed in my experiments, did not act on coägulated albumen, and chloride of sodium gave no precipitate. The pepsin was therefore totally destroyed, or at least made inactive.

Anxious to learn whether *liquid pepsin*, which had been put aside eight months before for experiments' sake, had retained its digestive properties, I examined this and found that, although slower in its action, it still dissolved albumen, and was also precipitated by chloride of sodium.

It seems, therefore, that the glycerine in the preparation of liquid pepsin prevented the pepsin from decomposition.

In the spring I had set aside moist precipitate (by chloride of sodium) of pepsin of the consistence ready for the press; when examined, after six months, it had a sweet odor, was pressed, dried, and its digestive power ascertained, whereby it proved to have the same digestive strength as when first prepared.

Several times the (chloride of sodium) precipitate, while draining on the cloth, was entirely frozen through, but proved, after thawing, not inferior in quality.

The purified, as well as the saccharated pepsin, examined twelve months after preparation, proved to be entirely as good as when recently prepared; they had lost nothing of their strength, and dissolved albumen in the same time and in the same quantities as when quite fresh. The only difference is, that with age the dry pepsin dissolves somewhat slower in acidulated water.

Action of Pepsin on Milk.—As the opinion is still prevalent, even amongst physicians, that only calf rennet has the property of separating the casein from the milk, or, in other words, to coägulate milk, it was interesting to me to try the action of pepsin on milk.

Five grains of saccharated pepsin, swelled in a little water and then stirred into one pint of milk, coägulated the milk in 30 minutes.

Of a solution of two grains of purified pepsin, two drops of hydrochloric acid and one fluid ounce of water, it took five drops to coägulate four ounces of milk in about 20 to 30 minutes; while 10 drops of dilute muriatic acid (20 drops to one ounce of water) did not curdle four ounces of milk in four hours.

Averaging 400 drops in a fluid ounce of the pepsin solution, it took one-fortieth part of one grain to coägulate four ounces of milk, or one grain to five quarts; according to this test, one part of pepsin will coägulate about 80,000 (eighty thousand) parts of milk.

The success of these experiments depends a great deal on the temperature; the best way is to add the pepsin to the milk when cold, and then heat it slowly; when kept cold it takes a much longer time to coägulate the milk. Also, when the milk is heated first, say to 100° F., before the pepsin is added, it takes three to four times as much pepsin to effect coägulation.

Alcohol Incompatible with Pepsin.—In my former articles,

written about pepsin, I have mentioned the incompatibility of pepsin and alcohol, and have spoken of the impropriety of dispensing pepsin in the form of wine or elixir. Having now a purer pepsin at my disposal than before, I repeated the experiments with entirely the same result.

Seven vials of solution of pepsin, each containing the same amount of pepsin and hydrochloric acid, were made with this difference, that, while vial No. 1 contained only one fluid ounce of water, No. 2 contained one-half drachm of alcohol and seven and a half drachms of water; No. 3, one drachm of alcohol and seven drachms of water; and so each following vial one-half drachm of alcohol more than the preceding one, so that in vial No. 7 there were five drachms of water and three drachms of alcohol. The same amount of coägulated albumen was given into each vial, which was exposed then to a temperature of 100° F. After six hours, in vial No. 1, all the albumen was dissolved; in No. 2 some albumen was left undissolved, No. 3 contained more, and in No. 4 over half of the albumen was not dissolved, while in 5, 6, and 7, the albumen was a little changed in appearance, but the bulk not diminished. The contents of those vials in which the albumen was not much acted upon, emitted that peculiar sour odor which characterizes discharges of an overloaded stomach (with beer or wine) by vomiting.

A solution of half a grain of purified pepsin in half a fluid ounce of water, with three drops of hydrochloric acid, was mixed with one fluid ounce of sherry wine, after 24 hours filtered, and then, with the addition of 150 grs. of coäg. albumen, exposed to a temperature of 105° F. After six hours—during which time the half grain of purified pepsin in acidulated watery solution would have dissolved 250 grs. of coäg. albumen—of the 150 grs., at least two-thirds yet remained. I now added six drops more of hydrochloric acid to bring the liquid to my standard acidity, but even at the end of 24 hours a large quantity of the albumen was undissolved.

Having never made pepsin by any other method, I am not able or justified to judge between the different products; but

that my process excels by simplicity, nobody will question. That a complicated process, by which strong bodies, as mercury, lead, and sulphuretted hydrogen, are alternately used, to prepare a substance, should or might impair the quality of the product, is very probable. That, nevertheless, pepsin, prepared by such a method, has the digestive power, speaks for the almost inexhaustible strength of it.

Another point of importance in my preparation I would call attention to, is that no artificial heat at all is used, neither by extracting the stomachs nor by drying the pepsin, and in my whole process no evaporation is necessary. To evaporate the solution of a substance, for which a few degrees difference in heat decide between life and death, is a very delicate operation, which is easily carried out for experimental purposes, but on a larger scale is almost impossible.

My pepsin differs from the pepsin described in Gmelin's Handbook, principally by the latter being easily soluble in water, while mine, although very soluble in the moist state, loses its solubility almost entirely by exsiccation.

That pepsin precipitate, which, combined with pepton, I obtained from the pepton solution, is more identical to the pepsin described in Gmelin's Handbook (volume 8, Zoochemie), as it is easily soluble after having become dry, is completely precipitated by alcohol, shows a more acid reäction, and its clear solution becomes more turbid by addition of hydrochloric acid than the pure pepsin.

To bring the pepsin into a finely divided state, I preferred the use of milk sugar to that of starch, the substance generally used for this purpose, particularly by the French manufacturers; reasoning that sugar with its antiseptic properties will contribute to the stability of it, while starch, particularly in the damp state, is very apt to get mouldy, and will then, as a necessary consequence, cause the decomposition of the pepsin.

When first making the commercial pepsin, which I called *saccharated pepsin*, I aimed to make it of such strength that one grain of the saccharated should correspond in its digestive

power to one teaspoonful of the *liquid pepsin* ("Amer. Journal of Phar.," January, 1871); that it can be made of much greater power I have plainly shown by the before-mentioned results.

As for the precise strength that will be best suited for the human stomach, that will have to be determined by physiologists. According to Schroeder, the normal gastric juice of man dissolves 24 per cent. of coägulated albumen; five grains of saccharated pepsin, which in acidulated solution dissolves 60 grains of coägulated albumen in four to six hours, would correspond to half an ounce of human gastric juice. No doubt the beneficial effect of pepsin has its limits. Several grains of purified pepsin, of which one grain dissolves 500 grs. of albumen in six hours, might do more harm in the human stomach than good, and might even do positive injury.

But, in this essay, I have given only facts based upon chemical experiments; to make use of these facts for therapeutical and physiological purposes, I leave to physicians.—*Monograph.*

ART. II.—OPHTHALMIA NEONATORUM. By Professor SEELY. [A Clinical Lecture at the Dispensary of the Medical College of Ohio.]

Gentlemen, the first case I beg to call your attention to is this little child, three weeks old. I open the eye-lids, and you see from one eye the matter is streaming out; from the other you might see it resting in the lower cul-de-sac.

We have before us a case of the so-called ophthalmia neonatorum.

What is the disease? From the physical characters, certainly all would say, a purulent inflammation of the conjunctiva.

I have already tried to impress on your minds some points in differential diagnosis in ophthalmic troubles. In these little people, while the tendency of mucous inflammations is towards the purulent form, yet it is by no means absolutely necessary

for them all to assume it, for we sometimes find but a catarrhal form with only a muco-purulent discharge, and this may be slight. A simple statement of such a fact may be sufficient to afford some comfort when you are brought into contact with irritated eyes in your obstetric practice.

Let us see what the symptoms are which should attract your attention. If, in from twelve hours to a week or two after birth, you find the eye-lashes matted together, or the eyes tearing a good deal, and, on depressing the lower lids, the conjunctiva looks red and swollen, you have sufficient cause for suspecting the commencement of an inflammation. If these symptoms appear in the first three days, you would be warranted in regarding them as the beginning of what is most strictly termed ophthalmia neonatorum—purulent conjunctivitis in new-born children.

Ætiology.—Almost any irritation of so delicate a membrane may produce a purulent inflammation, and yet there are certain irritants to which the eyes of the new-born are especially liable. The child, in its passage through the vagina, comes in contact with whatever secretions may be there, and particles from these may be the exciting cause. These vaginal discharges are probably the most frequent cause of this disease, and the cases brought before you have only too frequently such an origin.

I have given the mother of the child a prescription for blenorrhagia, which she says she was suffering from when the child was born. So, in this case, we probably need look no further for the cause, as you all know the virulence of the gonorrhœal matter. But do not be too ready to infer such an origin, as carelessness in cleansing the child and careing for it, by exposing the eyes to too bright a light, allowing the cold air to strike, etc., may produce the character of inflammation. For your therapeutics, it matters little what the cause may be. If you have formed suspicions or not, you give the necessary precautions about the hands being clean when the child's eyes are attended to, and that all the cleansing apparatus be absolutely

clean, and used only for the child. In this way you protect those about, and also prevent reïnoculation, if the mother has gonorrhœa. Gonorrhœal ophthalmia is only produced by some of the particles of matter coming in contact with the conjunctiva; and it is on this account that we caution, so strongly, patients with gonorrhœa against getting, in any way, the matter into the eyes.

Prognosis.—The prognosis will depend on the state in which you see the case. Seen in the premonitory stage, it is always good, for the congestion can almost always be removed by very simple treatment; if not seen till the eye-lids are more or less thickened, and discharging pus, it is still good; but if the cornea shows any signs of being involved, the prognosis must be guarded.

Treatment.—In the first stage, a weak astringent—such as half a grain of zinc or nitrate of silver to the ounce of water, or even a weak solution of the sulphate of morphia (gr. ½ aq. ℥ i.)—will suffice to relieve the difficulty, as a rule, if used every two or three hours.

If the second stage has come on, and there is more or less swelling of the lids and a purulent discharge, the indispensable condition is just what I insisted upon so strongly while talking to you at my Thursday's clinic, on discharges from the ear, *cleanliness.* Every few minutes the matter must be wiped away with a soft rag, and once every fifteen or twenty minutes the eye-lids should be gently opened, and some warm water allowed to run from the end of the rag over the ball, to wash the accumulated matter from the conjunctiva. This can all be done without waking the child.

Local Applications.—After you have thoroughly cleansed the eyes, in the milder forms, when the corneas are clear and the lids but little thickened, I recommend you to use—especially if you are not skillful in everting eye-lids, or can only see your patient once or twice a week—a weak solution of nitrate of silver, gr. ½ or i. to ℥ i.; a drop or two to be placed between the lids every half hour during the day if the solution is gr. ½,

every hour or every two hours if it is gr. i. This plan succeeds well in a large number of cases, and can be carried out by the mother or nurse.

If there is a good deal of thickening of the conjunctiva, the papillæ prominent, your surest plan is to see the patient every day, place its head between your knees, as I do here by way of illustration, evert the lids—the upper and lower at the same time, or separately, as you are able; then brush them with a strong solution of the nitrate—a ten or fifteen-grain solution of the pure, or a twenty or thirty of the mitigated—washing the solution off immediately with salt and water, and finally with pure water. Such an application as this once a day is sufficient—using in the meantime a collyrium of atropine or morphine (gr. $\frac{1}{2}$ aq. ℥ i), two or three drops of which are to be gotten thoroughly *into* the eye three times a day. I have never seen any cases where the diphtheritic element was sufficient to modify the plans of treatment marked out, necessitating the care insisted upon in purulent ophthalmia of adults.

Pure diphtheritic inflammation is never met with in newborn infants, but some of its characters are: For example, we sometimes find the lids pretty hard and hot, with a paleish conjunctiva secreting a thin discharge of a filmy character, that quickly covers the surface of the membrane. Weaker, in such cases, recommends internally a small quantity of calomel three times a day, and the rubbing on the brow of a little mercurial ointment, discontinuing this treatment, immediately the purulent discharge thoroughly begins. (See vol. i, part 1st, second edition Maladies des Yeux.) The all-important question in this is, how to act when there is an affection of the cornea. Your attention must be continually directed to the state of the membrane, for in complications on its part lie the dangers. Here we want to get rid of the cause of the corneal affection—viz., the swelled lids and chemosed bulbous conjunctiva—as rapidly as possible; hence, we continue the applications and soothing wash, making use of extreme care if the lids are everted.

If there is an ulcer, a paracentesis of the anterior chamber should be made to relieve the intra-ocular tension.

If a perforation has occurred, and a prolapse of the iris exists, it should be snipped off.

The perforation may be large and the eye become staphylomatous, and require amputation.

The narration of a case that recently presented itself at my private rooms will be sufficient to put you on your guard in the after-treatment of eyes left with a corneal cicatrix.

A girl of thirteen had, while a child, some attacks of circumscribed keratitis, from which resulted rather a prominent corneal cicatrix. No special attention was paid to the eye, until the parents noticed an increase in its size. The cornea and pericorneal tissue had yielded, the anterior chamber had increased in size, and when I saw the case, the papilla was cupped and the eye was blind from glaucoma.

I have put you on your guard what are the objective symptoms to be looked for, as, in little children, no subjective ones are to be expected. Every eye that presents a corneal cicatrix, and especially an adherent one, the so-called leucoma adherens should be looked after. Now, if in such an eye you at any time detect an increase in the intra-ocular tension, an iridectomy should be insisted upon at once. We had long been aware of the danger in such cases, but it remained for Grâefe the great teacher whom all mourn, to put in a clear light the exact relation between cause and effect, and show the steps that lead from one to the other.—*The Clinic*, February, 1872.

ART. III.—ON THE TREATMENT OF PURULENT OPHTHALMIA IN NEW-BORN CHILDREN. By R. LIEBREICH, Ophthalmic Surgeon and Lecturer to St. Thomas's Hospital, London.

Gentlemen,—This is not a disease which is amenable to treatment only up to a certain degree, and which may lead to unfavorable results even under the most rational treatment; but,

on the contrary, it is an affection which, even in its worst form, is always perfectly curable.

What, now, is this treatment? It consists, first, in careful cleansing; secondly, in the local application of cold; and, thirdly, in cauterizations with mitigated nitrate of silver (one part of nitrate of silver and two parts of nitrate of potassium fused together). Allow me to speak of this in a somewhat elementary and detailed manner. As regards cleansing, it is above all necessary to explain to the attendants the importance of it, for, ordinarily, the fear of injuring the child prevents them from properly opening the eyes in order to remove the secretion. I do not recommend syringes, so generally used, for cleansing: First, because they are dangerous to the attendants, who, in using them, may easily have some of the contagious matter spattered into their eyes; secondly, because by this method the secretion is not completely removed, even after pouring much water over the child. A fine sponge, if you can rely upon its being kept clean, or, if not, small pieces of moistened linen rag are preferable for effectually cleansing the conjunctiva.

The application of cold, if made in a careful and suitable manner, is of great assistance in the treatment. In the mildest form of the disease this application alone may even effect a cure in a few days. It is then only necessary to apply, for several hours a day, small linen rags, moistened by being dipped in cold water, changing them constantly. In the more serious cases, on the contrary, when there is much swelling, redness, and heat in the eye-lids, and a copious discharge of thick, yellow, purulent secretion, it is necessary to apply, day and night, without intermission, small rags, previously placed upon ice, and to renew them continually. Later, when the elevated temperature begins to fall, the applications may be discontinued during the night, and gradually reduced, according to the course of the disease. In order to prevent the child from taking cold, it is necessary that the rags should be of a size merely to cover

the eye-lids without touching the bridge of the nose, and not to make them too wet.

We now come to the real curative treatment—that is, the cauterization. It should only be done with mitigated nitrate of silver. The eye-lids should be reversed one after the other, and after being carefully cleansed, touched with the caustic, which must be passed over all the swollen and red part of the mucous membrane. Before replacing the eye-lids in their natural position, it is necessary to neutralize the free nitrate of silver by a drop of salt water. For the few first days only of the disease we may restrict the treatment to the application of cold, and then commence the cauterizations; repeat them once a day, never more frequently, and, after an evident reduction of the disease, once every two or three days. It is important not to repeat the cauterization until the scar of the previous one has disappeared.

To drop weak solutions of nitrate of silver into the eye is not advisable, even in the mildest forms; for the graver forms it is completely insufficient. Cauterization with pure nitrate of silver ought never to be used, neither in this nor any other disease of the conjunctiva, as it is impossible to limit its effects. The slightest touch with pure nitrate of silver, in fact, produces a strong cauterization, not limited to the surface of the mucous membrane, but attacking the subjacent connective tissue. The cicatrization which is the result of such cauterizations produces a permanent irritation of the eye, which cannot be removed by any possible means. None of the other known caustics can replace the mitigated nitrate of silver in the treatment of purulent ophthalmia. Let nobody avoid the trouble of preparing a pencil of nitrate of silver himself if he has not a suitable one already prepared at his disposal. The sole difficulty lies in procuring an iron mould, into which a mixture of one part of nitrate of silver and two parts of nitrate of potash is to be poured, after having been melted over the fire. This difficulty could be avoided by immersing an iron wire repeatedly with one end into the melted mass until, on cooling, a suf-

ficiently thick layer of caustic adheres to it. That is the procedure which I formerly recommended for caustic probes in cases in which it is desirable to cauterize with a very fine point or in a very narrow canal (lachrymal canals, lachrymal sac, ciliary roots, etc.)

In the most difficult cases, cleanliness, cold and cauterization are sufficient, and enable you to form a good prognosis. The case is, however, different when children come under your treatment after a more or less great part of the cornea has been destroyed, the iris projecting, the capsule of the lens injured; here the prognosis depends entirely, in the individual case, on the existing destructions. Ulcers of the cornea of no great extent, and not too near to perforation, allow of a still favorable prognosis; but it becomes more unfavorable already, when perforation has taken place, and the iris projects. There is a decidedly bad prognosis if almost the greater part of the cornea had been destroyed before the child came under your treatment.—*London Medical Times and Gazette.*

ART. IV.—DIAGNOSIS OF SYPHILIS BY THE MICROSCOPIC EXAMINATION OF THE BLOOD. By JAMES R. CHADWICK, M. D.

In a letter from Vienna, dated January 12, 1872, to the "Boston Medical and Surgical Journal," Dr. James R. Chadwick announces the important discovery by Dr. Lostorfer of what he terms the syphilitic corpuscles in the blood of those affected with syphilis, and that, by a microscopic examination of the blood, he can, with certainty, determine the existence or non-existence of syphilis.

We very much regret that space will not permit the publication of the entire letter, but we give such extracts as will present the prominent facts. The following will show the mode of examining the blood, and the results:

"The manner of conducting the researches consisted in

taking a drop of blood, placing it immediately between a slide and covering-glass, then setting the specimen under cover. A large number of slides were thus prepared, and daily examined microscopically with a No. 10 immersion lens, Hartnack. The first two days, nothing abnormal presented itself; but on the third, minute shining bodies were discerned, which grew from day to day, until they attained the size of red blood-corpuscles. The shape was, in most instances, round, but modifications of that form were here and there noticed; they were all, however, provided with tapering processes or "sprouts." The number of these corpuscles to be seen at one time within the field of the microscope was variable, amounting in only one specimen to fifty. A month later, these objects were still visible. A solution of sugar, as well as several other solutions, caused them to shrivel up, become, as it were, folded upon themselves, lose their shining aspect, and cease to grow. Cold was also found to affect their development, inasmuch as a temperature below ten degrees Reaumur (fifty-four degrees Fahrenheit) put a stop to all growth."

After numerous experiments of a character to satisfy himself beyond the possibility of a doubt as to the connection between these bodies and syphilis, Dr. Lostorfer requested Prof. Stricker and Professor Hebra to put to the test his power of diagnosticating syphilis by the microscopic appearances of the blood. They readily consented, and upon various occasions prepared for him numbered slides, with blood of syphilitic and non-syphilitic individuals, and, to their great astonishment, he, unerringly, was able to select from the preparations those where the blood was tainted with syphilis.

The effect produced upon the medical gentlemen assembled at the meeting of the "Gesellschaft der Aerzte," by the announcement of this demonstrated discovery, will be seen by the following sentence from Dr. Chadwick's letter:

"As Dr. Lostorfer ceased speaking, a burst of genuine enthusiasm escaped from the assembled physicians, while Prof. Skoda rose to greet the hero of the evening as the proclaimer of

what was destined to prove one of the most important discoveries of the age. He regretted that it was not customary in Austria to give medals or other rewards of merit in such cases, stating that, had this statement been made in Paris, he would have been crowned, as he deserved."

As above stated, Dr. Lostorfer gives the name of syphilitic corpuscles to these bodies, and is of the opinion that they originate in one or two ways; "either from germs always present in the blood, but stimulated to growth by the syphilitic virus alone, or from such introduced bodily into the blood at the time of infection."

ART. V.—MEDICAL PRACTICE—CASE OF GRANULAR DEGENERATION OF THE VOLUNTARY MUSCLES. By EDWARD MERYON, M. D.

I have now under my care at the Infirmary for Epilepsy and Paralysis, a case of degeneration of the voluntary muscles, such as I have described in two papers communicated to the Royal Medical and Chirurgical Society, and which the Council have done me the honor to publish in the Transactions for 1852 and 1866.

The subject of the present case is a girl aged ten, in whom the peculiar waddling gait is as yet the only symptom. There is, however, a gradually increasing weakness of the muscles of the back and legs, and an entire absence of any indication of nervous disturbance. The girl has neither ache nor pain, nor is there at any time or under any circumstances the quivering or starting of the diseased muscles which Cruveilhier has remarked in the cases which he has described as of "atrophie musculaire progressive."

When the patient was first admitted into the Infirmary, I hoped that I had detected a clue to the cause of the disease—as being in the semi-lunar ganglion—in consequence of pain in the region of the epigastrium, which occurred after any little

exertion; but that pain was undoubtedly of a dyspeptic character; for no sooner was the child carefully fed than the pain vanished, and for the last seven weeks she has had none of it, notwithstanding that I have made her walk, and use gymnastic exercises as much as she is able to do. For about six weeks her power of walking remained nearly stationary. At one time I thought it was somewhat improved; and during that time she was under the influence of arsenic.

About a fortnight ago, for no adequate reason, I discontinued the arsenic, and ordered the hypophosphite of soda, with a bitter tincture, and continued the faradization, which has been used from the day of her admission; but during the period that she has taken the hypophosphite, she has rapidly lost power; so much so that she can now scarcely stand without supporting herself with her hands. I have therefore resumed the use of the arsenic.

The girl is of healthy parentage, but has a sister, older than herself (about fourteen), who is similarly, but more affected. She can no longer stand, and her arms are beginning to be implicated in the disease. A brother, not yet three years old, is already showing symptoms of the disease.

In every case of so-called muscular atrophy which I have seen or read of in which disease either of the spinal cord or of the medulla oblongata has been detected, some symptoms of nervous disturbance have manifested themselves during life, either in pain or in tremor or quivering of the diseased muscles; but in every case which I have described as of *granular degeneration of the voluntary muscles*, there has been an absolute absence of any indication of nervous disturbance, as there is in my present patient. I am therefore induced to continue in the belief which I have heretofore expressed of an idiopathic disease of the muscles, which is probably dependent on a defective nutrition of the sarcous elements. Every case, also, has begun in the lower extremities, and has appeared to extend in a centrifugal direction, respectless of the course and distribution of nerves. In the case in question, the sacro-lumbalis,

the longissimus dorsi, the spinalis dorsi, the quadratus lumborum, and, I believe, the psoas and iliacus muscles are affected, so that the spinal column has nearly lost its sigmoid curves; and if the arsenic fail to arrest the morbid action, the muscles of the thigh will be next diseased, and then those of the legs. When the legs are disabled, I doubt not that the serrati and splenii muscles, the spinati, the deltoid, the biceps and triceps, and eventually the muscles of the forearm, will become successively implicated in the order in which I have named them.—*British Medical Journal.*

ART. VI.—MILK AS A DIET DURING LACTATION. By ROBERT P. HARRIS, M. D., Pennsylvania.

From a series of trials which I have very successfully made, and of which the three cases here given are recorded as examples, I have become convinced of the great value of milk as a food for delicate mothers who desire to nurse their own children. By the term "delicate" I do not mean those actually diseased, or apparently inclined to tubercular or other serious organic affections, but a large class of American women in the higher walks of life who fail as nursing mothers, either because their milk is too small in quantity or deficient in nutritive elements. Such women are generally below their proper average in weight; have little, if any color in their cheeks; and eat but a moderate amount of food. There may not be any deficiency in the development of their mammary glands, although their mammæ are usually smaller than they should be; but this is chiefly due to the absence of adipose deposit. All such subjects do not bear a milk diet well; and in such the plan must be abandoned, as the diet should not only agree with the mother, but be palatable, so as not to diminish her appetite for her ordinary diet. She should be able to eat her three meals as usual, and consume the requisite amount of milk in addition. There are many women who have lost all their childhood's relish for

milk, just as there are sometimes young children who do the same thing, and cannot be made even to try its efficacy. And there are others who are anxious for success, and do make the trial faithfully, but are reluctantly obliged to discontinue the diet in consequence, not of any disrelish, but of an inability to digest it.

Happily, there are also many who not only like the taste of milk, and can continue its use indefinitely, but who experience a wonderful degree of benefit from it, not only being able to nurse their infants, whom they would otherwise have to give to a wet nurse, or raise by hand, but greatly improved in health and strength, gaining flesh, increasing in appetite, and avoiding the ills resulting from the drain upon their system, so commonly experienced after a few months of lactation.

The first case I shall mention is that of a lady who came from New York to put herself under my care, and was delivered in due time of her fourth child, a boy, weighing eight pounds. She was below medium height, pale, and weighed, on an average, eighty-six pounds. After the birth of her first child, a female, her milk failed in a few days, and a wet-nurse was called in. She nursed her second, also a girl, until it was about a month old, by which time the infant was so much wasted from the deficient quantity of the lacteal secretion, that two days and nights constant care in feeding it with diluted cream and brandy every fifteen minutes were required to give it the requisite strength to nurse from a healthy woman, and thus save its life. Precisely the same result attended the attempt to nurse her third child, also a female; and in a day after it ceased to draw upon the mother, her milk dried up. The fourth child, being a male, was a little larger than the previous children, and nursed more vigorously. When seven days old, it became evident that he did not get nourishment enough, and an additional feeding was resorted to for a short time. This affected his health so that he had seven green passages in twenty-four hours. I then proposed to the mother to try the efficacy of a milk diet for herself, which she did, taking it as a

drink, in small portions, several times a day. In two days her baby was entirely well, and she began to feel, for the first time in her life, a painful distention of the breasts. She improved steadily in health, and was soon able to be up and about the house. Her infant grew rapidly, and weighed thirteen pounds at two months, at which time she consumed two quarts of milk daily, and said that she ate in addition her full complement of food. She continued to nurse this boy until he was eighteen months old, and weighed twenty-six pounds, increasing her own weight at its maximum to 105 pounds, or nineteen pounds above her ordinary average. It is not necessary to say that there was a marked improvement in her health over what it had been for several years.

The second example I shall give is that of a tall, spare woman, wife of a merchant in this city, who had been dyspeptic for several years prior to her marriage, and whose average weight was from 106 to 112 pounds. Her infant was her first, a large boy, whose birth was followed by a considerable flooding, producing partial syncope. I commenced a milk diet in her case a few days after delivery, and with the most happy results. Her breasts, from being small and flaccid, soon filled up, so that she was enabled to nurse with entire satisfaction. She took a pint of boiled milk morning and evening, and at noon a pint of broma, made with cream. Her son grew very large and heavy, and she increased so much that by the time she commenced to wean him her weight was 177 pounds. Being tall, and of large frame, this addition gave no appearance of grossness, but added materially to her healthful appearance and commanding presence.

The third case is that of another small woman, of an equal station in life with the other two, who seldom weighed above 100 pounds. She had lost one child in consequence of failure of her milk, hand-feeding and diarrhœa ending in convulsions. Her second child is now seven months old, and as an evidence of the effect of milk upon its mother, weighs twenty-one pounds, which is a large weight for a female child. The mother

nurses without any trouble or feeling of weakness, and has increased her weight to 116 pounds. She has a better appetite for her ordinary food than she has ever had, and this weight mentioned is the maximum of her life.

I have used milk in a variety of combinations, but think that the less farinaceous admixture it contains the better it answers the purpose for which it is designed.—*American Journal Obstetrics.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—ANALYSIS OF VARIOUS ARTICLES. Published in the "Medical Times and Gazette," the "Dublin Quarterly," and the "London Lancet," etc. (Original copies). By Prof. JAS. M. HOLLOWAY, M. D., Louisville, Ky.

Treatment of One Hundred Cases of Stricture of Urethra by Different Methods.—In the "Dublin Quarterly" for February, 1871, Dr. Wm. Stokes, Jun., Surgeon to Richmond Surgical Hospital, discusses the various methods of treatment of 100 cases of stricture, and reports in detail some of those possessing special clinical interest. The cases were treated as follows:

Gradual dilatation, 76;
Forced dilatation, 8;
External urethrotomy, 4;
Internal urethrotomy, 12.

Having employed almost all of the numerous instruments used for gradual dilatation, Dr. Stokes gives the preference to the French "bougie Olivere" and "bougie à boulé." He has also found the *double length bougie catheter* of great service. The latter instrument, as shown by diagram, is composed of a very fine, flexible, tapering gum olive-pointed bougie, the upper end of which can be attached by a metal screw to a flexible gum

catheter of larger size. The bougie is first made to pass through the stricture and enter the bladder. The catheter, slightly tapering, is screwed on, and made to traverse the urethra, pushing in front of it the bougie, which is so flexible that it coils up in the bladder without irritation.

The great objection to the laminaria bougie is its dilation beyond the seat of the stricture, giving rise to pain and difficulty when withdrawn.

Dr. Stokes believes that organic stricture is curable, *i. e.*, in some of the cases treated by himself it was not necessary to continue the occasional introduction of the bougie. In this he differs from Sir Henry Thompson, who believes that in every case of organic stricture, no matter by what method it may have been dilated, there is a constant tendency to contraction at the seat of the stricture; and that this tendency should be combatted by the use of the bougie once every week, fortnight or month. Granting the correctness of Dr. Stokes's experience, the rationality of Sir Henry's preventive measure is obvious. In those cases in which there was no recontraction after a lapse of years from the time of treatment by gradual dilatation, it is probable that the frequent passage of the bougie caused an absorption of the deposit at the seat of the stricture.

Forced dilatation, employed in eight of the cases, was not followed by as satisfactory results as is claimed for it by other authorities. Forced dilatatiou causes a *lacerated* wound, and is more often followed by a relapse. It is, however, according to Sir Henry Thompson, the simplest operation, and the one most easily performed after a guide has been safely passed through the stricture.

The indications for internal urethrotomy are not definitely stated by Dr. Stokes. From a careful perusal of the twelve reported cases in which he resorted to this method, the following condition and circumstances seem to have been his guide—viz., when the stricture is of long standing, and has resisted other methods of treatment; when, after introducing with difficulty a small-sized bougie (No. 2 or 3) the operator finds it impossible

to introduce others of larger calibre; when, after the stricture has been completely dilated, the resiliency of the part speedily produces re-contraction; when internal urethrotomy has once succeeded, but the stricture returns through negligence or bad habits of the patient; when the stricture is so tight that the surgeon is only able to introduce a fine filiform bougie.

None of the cases were treated by *continuous* dilatation, the value of which method is so highly estimated by Sir Henry Thompson, because of its simplicity, celerity, and adaptability to the class of patients in whom the frequent introduction of instruments is so irritating, and so frequently followed by rigors and urethral fever. In the opinion of the analyst, a few, at least, of the cases treated by Dr. Stokes by internal urethrotomy, might have been cured by continuous dilatation—*e. g.*, case No. 2, a patient aged thirty, admitted September 16, with a stricture of eight years' standing. Etiology obscure. *A No. 3 catheter was introduced on the day of his admission.* On the 18th (two days after his admission) internal urethrotomy was performed, and immediately thereafter a No. 10 gum catheter was passed and *kept in for three days* without pain or constitutional disturbance. In cases similar to this, after a No. 3 catheter has been passed, it would be easier and *safer* for the general practitioner to bridle the instrument, and allow it to remain from seven to ten days; when, as a general rule, a No. 6, 8, or 10 bougie can be passed without difficulty. Such has been the experience of the analyst. Case No. 3, reported by Dr. Stokes, is somewhat similar to No. 2. A No. 3 catheter was passed, and had it been kept in for seven or ten days, might have been followed by a No. 8 or 10 bougie.

For the performance of internal urethrotomy, Dr. S. gives preference to the method originally devised by M. Maisonneuve, of Paris. For a diagram of the instruments, and a clear and concise description of various steps in this operation, the reader is referred to the "Report on Internal Urethrotomy," by Dr. C. H. Mastin, of Mobile, Ala., published in the last (March) number of the "Richmond and Louisville Medical Journal."

The indications for a resort to external urethrotomy by Dr. S. in the four reported cases, were: impermeability of the stricture by the most delicate instruments, complicated by perineal fistula; or vesical rupture, with extravasation of urine into the perineum. Of the four cases operated upon by this method, one died on the sixth day; the other three were discharged cured. This operation is justly regarded as the most difficult one in surgery, and should not be resorted to until all other means for the relief of the distended bladder have failed. In this, Dr. Stokes agrees with the majority of those who have written authoritatively upon this subject.

A careful analysis of the report of case No. 3, however, forces the conclusion that the above rule was not fully observed by Dr. Stokes, though "much anxious consideration" was experienced in determining whether "*to puncture the bladder above the pelvis or through the bladder*, or to perform external urethrotomy."

The patient, age 34, had been suffering from stricture for eleven years, for which he had been treated unsuccessfully by gradual dilatation. On the day of admission, (while suffering from retention, and *in a state of intoxication*, Dr. S. succeeded in introducing a small gum catheter, (No. ½). On the following day, retention still unrelieved, he failed to pass a No. 3 catheter, but introduced a fine filiform bougie. After this the patient *passed water* in a warm bath. During the two succeeding days the bladder refilled, though he could always pass a little water when in a bath, *i. e.*, the urine overflowed and dribbled away. On the third day after first attempt to pass the catheter, a funnel-shaped tumor made its appearance in the urethra, (it is not stated at what point). "*A small catheter* (No. 2) *was introduced, and cold lotion applied to scrotum.*"

"June 11.—The introduction of the catheter gave great relief, and the lotion apparently reduced the scrotal swelling. The catheter *was left in all day, and the urine allowed to flow constantly.*"

On the morning of the 12th, it is reported that the catheter

had been pulled out by the patient during the night, and the urine had "extravasated up to about one inch above the pelvis, a red line mapping out the extent."

At this period in the history of the case the necessity for external urethrotomy ought not to have been entertained; neither would puncture of the bladder have been good surgery. The damage was done; the bladder was ruptured; the urine was extravasated. In retention of urine from impermeable stricture, the first and sole object, for the time being, of either one of these procedures, is to prevent rupture of the bladder. After extravasation, the best plan of treatment in such a case is to make free incisions through the skin of the perineum, to empty the cellular tissue of the urine; after which the urinary fistula will be sufficient to keep the bladder drained. If external urethrotomy could be properly resorted to in such a case, it would be only after the patient has fully recovered from the effects of the rupture, the extravasation, the sloughing of the perineum and scrotum, and, above all, of the ill health induced partly by these influences and partly by his dissipated habits, and the constant irritation of an unemptied bladder through a long series of years.

The extravasation might have been prevented if, on the day of his admission into the hospital, the patient's bladder had been punctured after Dr. Stokes had discovered, by his thorough examination, that it was impossible to introduce an instrument large enough to empty the bladder, and that a slight flow of urine escaped only when the bladder could actually hold no more.

More special attention is called to this case and the criticisms of the analyst of Dr. Stokes's management of it, because it is known to the writer that two of the most skillful surgeons in this city have more than once performed external urethrotomy for retention of urine from organic stricture. One of these surgeons and the analyst were in consultation upon the following case last fall: "The patient, a negro man, aged about 65, had suffered with stricture for over fifteen years, the result of

a gonorrhœa. Thirteen years ago he suffered from retention of urine, requiring relief by the catheter. Since that time he has had much trouble; and for the last two years the stream has been small, ejected with but little force, sometimes dropping upon the toes of his boots, at other times directed against the leg of his pants above the knee. He had been reduced in health from frequent and painful micturition during the day and more frequent calls during the night. It is highly probable that his bladder had not been entirely emptied for months. About four days before we were called to the case, the patient lifted a heavy piece of timber, "strained himself," and in a short time had complete retention of urine. His sufferings were correspondingly increased, and he summoned medical advice. The two physicians who visited him made frequent and prolonged efforts to introduce catheters of different kinds and calibre, but not only failed, but, unfortunately, employed enough *force* to produce a *false passage*. The surgeon, alluded to above, found the patient in this condition, and after making a careful, but prolonged attempt to avoid the false passage and engage the catheter in the stricture, ordered warm baths, an opiate, and rest until morning. This surgeon being called away, he advised that I should be sent for to perform external urethrotomy. Upon careful examination of the patient, I urged the immediate puncture of the bladder, which, with the concurrence of the two physicians in attendance, was done, the puncture being made through the rectum.

This was followed by immediate relief of all the symptoms of retention, and the danger of rupture of the bladder was removed. The canula was bridled and allowed to remain for *five* days. In the meantime, treatment was directed to the relief of the inflammation and irritation of the urethra and surrounding parts, and the improvement of the general health of the patient. Sleep and appetite returned, and on the fifth day a No. 4 silver catheter was, after a prolonged but gentle effort, made to pass the false passage, the stricture, and enter the bladder. The canula was withdrawn from the rectum, and for

a few days thereafter a small quantity of urine escaped through the opening in the trigone of the bladder; but this ceased spontaneously. The No. 4 catheter was bridled, and the patient ordered to keep his bed. Chafing, however, under this rigid confinement, he was allowed to occupy an easy chair.

On the third or fourth day, while moving about, the catheter escaped from the urethra. Finding that he was able to pass a small stream and partly empty the bladder, and because, moreover, the urethra was still very sensitive, it was decided to give him two days of absolute rest from instrumental interference. At that time a No. 8 English catheter was passed with ease. After a few more cauterizations on alternate days, the patient was dismissed, and directed to use an elastic bougie once every week or fortnight. In this case, reported briefly for illustration, the surgeon alluded to more than once insisted upon external urethrotomy. The success of the treatment by other and less dangerous means proves that the operation was not necessary. It will not be considered dogmatic to add that, had external urethrotomy been performed at a time when his local and constitutional condition was so unfavorable, the termination of the case would have been similar to the one reported by Dr. Stokes.

In retention of urine, occurring suddenly during a debauch or after excessive exertion, in patients who have suffered for months or years from organic stricture, and not easily relieved by careful attempts at catheterization and by hip-baths and opiates, the rule should be to puncture the bladder by one or the other methods, and allow the urine to escape through the canula of the trocar until the acute congestion or inflammation, that causes the sudden and complete retention, has subsided under appropriate treatment. *Then, and only then, should the radical cure of the stricture be attempted.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

CLINICAL LECTURES AT THE "HOPITAL DE LA CHARITÉ," given by S. JACCOUD, Assistant Professor to the Faculty of Medicine at Paris; Physician to the Hospital St. Louis; Chevalier of the Legion of Honor; Corresponding Member of the Royal Academy of Science of Lisbon, and of the Medical Societies of Berlin, Vienna, Wurzburg, etc. Containing twenty-nine wood cuts and eleven chromo-lithographs. [Translated by Dr. J. D. JACKSON, of Danville, Ky.]

TWENTIETH LECTURE—SMALL POX.

Diagnosis and Prognosis in Discrete Variola—Circumstances Influencing Prognosis—Phenomena of the Prodromic Period—Stage of Eruption—Characteristics of Discrete Malignant Variola—Importance of the Individual Condition in Making a Prognosis—Malignity—The Reasons for and the Results of Treatment.

A Rare Example of Repetition of Variola—Diagnosis of Variola and Varioloid—Thermometrical Exploration in Variola—Character of the Initial Fever—Ascension and Defervescence—Defervescence in Confluent Variola—Character of the Secondary Fever—Tertiary Fever in the Confluent Form of the Disease—Thermoscopic Curvatures.

Gentlemen,—That young woman, twenty-two years of age, who lies there in No. 13 of St. Anne's Ward, is worthy of your most serious attention; the individual conditions of her malady are truly interesting, the prognosis has been for a long time uncertain, and the clinical study of this case is rich in useful instruction. This woman, well formed and robust, came into our service a few days since with a combination of symptoms, dating back two days and a half. That was on Monday evening. A violent chill, with which she was seized Saturday morning, indicated with precision the début of her disease; to this initial chill, which was not repeated, there succeeded a violent headache, and extremely severe pains in the lumbar region, at the pit of the stomach, and in the lower limbs; such were the phenomena of the first twenty-four hours. On the second day the preceding symptoms persisted, and there came on bil-

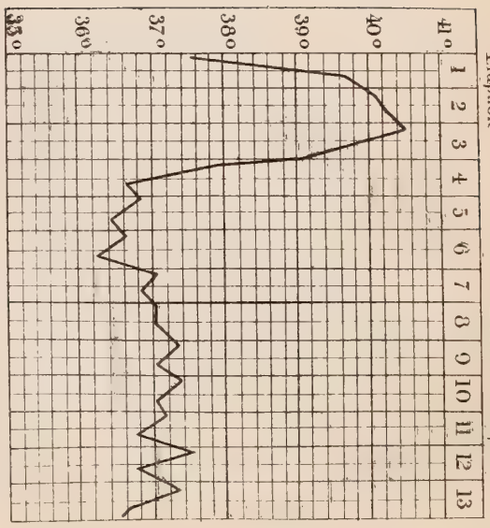


Fig.1. Varioloid. Richard Leo. of Leipzig.

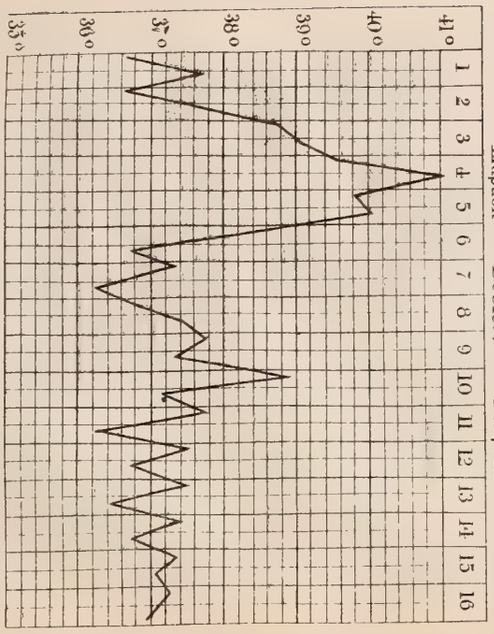


Fig.2. Varioloid. Richard Leo. of Leipzig.

Fig.3. Variola vera gravissima. — Defervescence in confluent. Richard Léo of Leipzig.

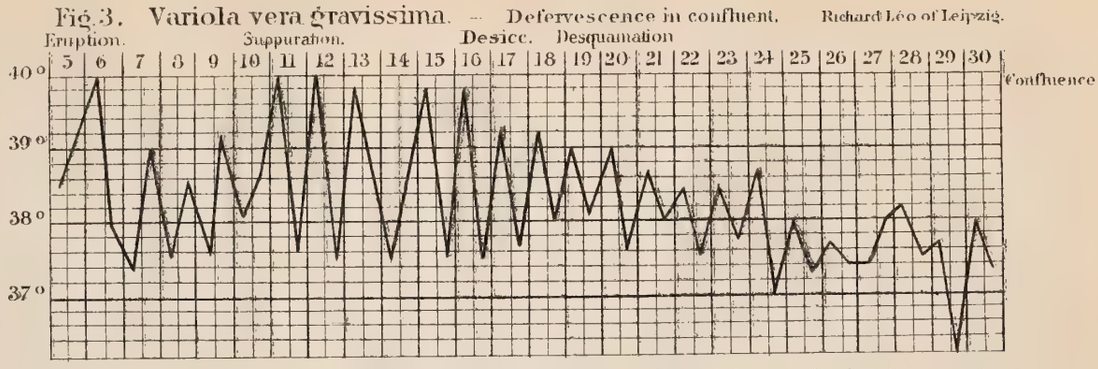


Fig.4. Variola vera. — Secondary fever during 6 days. — Tertiary fever at desiccation. — Richard Léo.

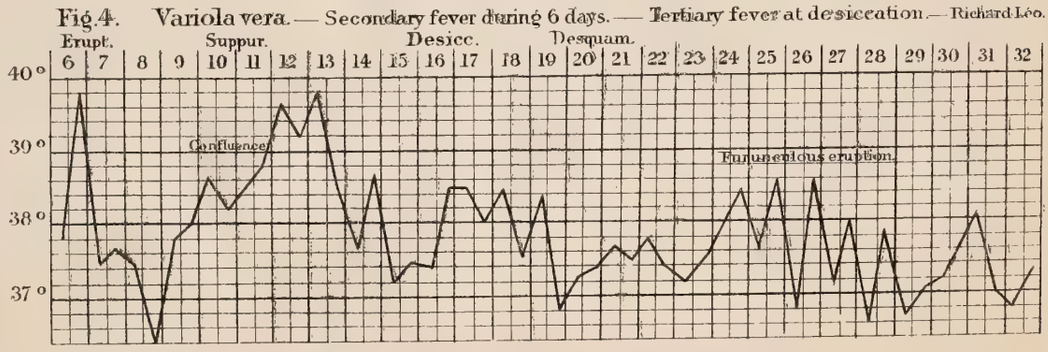


Figure 5.

Variola. — Woman of 22 years. — (Ste Anne, 13)

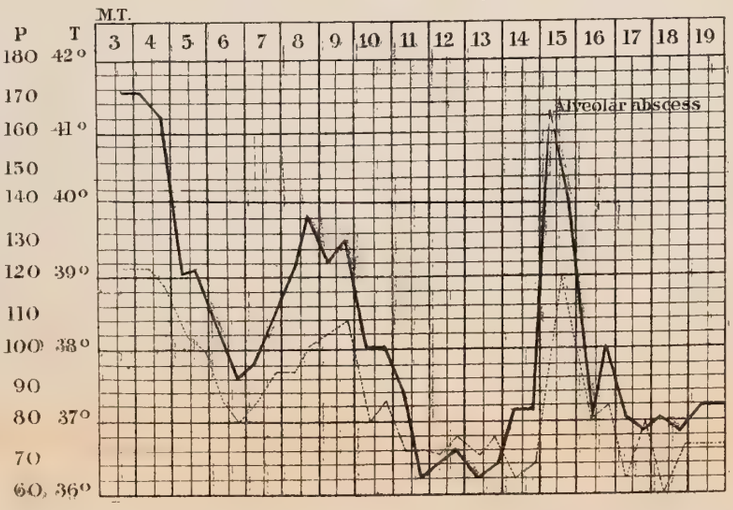
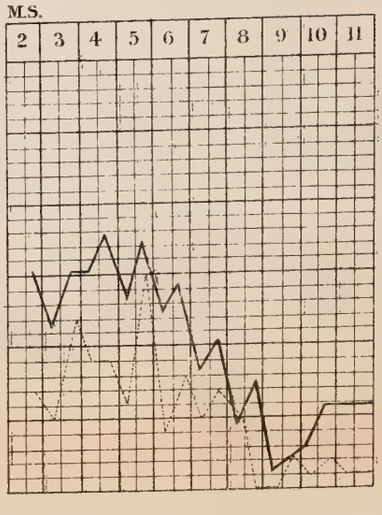


Figure 6.

Varioloid - Man of 24 years - (St Charles, 10)



Lith. By Hart & Mapother, Louisville, Ky.

ious vomiting, which was repeated three or four times. On the morning of the third day the vomitings had ceased, but were replaced by a difficulty in respiration, which soon mounted into a true dyspnœa. In the afternoon of Monday, sixty hours after the initial chill, the woman was brought into our ward; the labored respiration, which was the most striking phenomenon, was accompanied by a burning fever; the pulse was small and hard, and 110 in the minute, the temperature 41.5° (centigrade), and what was remarkable, there was no agitation; on quite the contrary, the patient lay with her eyes closed, and scarcely opened them to answer our questions, as she lay there quietly on her back, evidently suffering from prostration; the rapid movements of her chest, which she heaved thirty-six times and a quarter to the minute, contrasted painfully with the faintness and inertia.

Supposing that we even knew nothing about the lumbar and epigastric pains, and the antecedent vomitings, such a state, in the middle of the third day, would limit at first sight the diagnosis between a pneumonia and an eruptive fever; uncomplicated meningitis excepted, these, indeed, are the only maladies which can present at this time a temperature of 41.5°). But an examination of the chest only gives negative results; there need, therefore, be no question of an eruptive fever; the dyspnœa, independent of all modification of the respiratory apparatus, was the result of a perturbation of the nervous system in an organism elaborating and preparing for an eruption. This is that peripneumonic anxiety which has been dwelt upon by the old observers.

We were, I repeat it, in the middle of the third day; this was too late for a scarlet fever; besides, there was neither angina nor ganglionary engorgement; it was not too late for a rubeola, the prodromic symptoms of which are longer than those of the other exanthemitic fevers, but there had been no sign of catarrh, and then the chill of measles is rarely single, the fever is frankly remittent, on the third day in particular the remission is such that the heat is scarcely above normal; our tem-

perature of 41.5° was incompatible with this hypothesis. So that, only to consider the peculiarities of the febrile movement and the period of the disease, we will without hesitation reach the diagnosis—variola; in addition to this, the antecedent symptoms were as characteristic as possible; the patient had presented the full complement of phenomena of the prodromic period of this pyrexia. When they exist clearly marked you can attribute a value to them which is absolute; but these may fail to be present, or be masked, in which case a consideration of the temperature with reference to the data of fever is the best element of judgment.

The case in question, then, was one of variola, which had reached the middle of the third day, and remarkable for the violence of its manifestations, there was, however, no reason for anxiety, because the normal period for the eruption had not passed; you will frequently see the prodromic period of variola, and also of varioloid, progress with a frightful train of concurrent symptoms, but these symptoms are only in appearance threatening; when the eruption comes out at its regular time, all this disappears, as if by enchantment, and the disease may be as benignant as possible. But one can only dwell in this security until the time of the eruption; if this moment is passed over, and the grave phenomena persist, the prognosis changes entirely. In the actual case we had passed the ordinary epoch of the eruption of confluent variola, but we had yet twelve to twenty-four hours before us for a discrete variola. I could not, then, be seriously frightened, despite the apparent gravity of the situation. Absolute diet and a warm infusion of borage summed up the treatment.

On the next day the disease had passed through three full days, and the fourth was commencing, and the condition of the woman had grown worse; the prostration was greater than on the preceding day, and the temperature presented no remission; it was always at 41.5°; the dyspnœa persisted, and we learned that the patient had been so delirious all night as to disturb the sleep of her neighbors. At this time a superficial examination

showed no trace yet of any eruption; but we concluded a very close inspection by being able to perceive some rosy spots, circular, and unelevated beneath the skin, true maculæ. It was not difficult to count them, their small number being truly surprising; there were two upon the back of the left hand, three or four in the interscapular region, two over the lumbar region, and still two on the exterior surface of the left thigh, and not a single one upon the face, contrary to the ordinary march of the eruption, which generally commences upon the face and neck. This was nevertheless sufficient to justify the diagnosis; the form even of the variola could be affirmed; it was a discrete variola, since the eruption which we had perceived in the very beginning coïncided exactly with the commencement of the fourth day. We could hence hope that the grave symptoms would be rapidly dissipated in proportion as the eruption would be completed; but as the patient had been greatly wasted by the prodromic period, the indication was to hasten as much as possible the development of the exanthem, and I, with this end in view, prescribed, along with the infusion of borage, a julep containing six grammes of spirit of mindererus.

Twenty-four hours later, at the commencement of the fifth day, the only improvement of importance was a lowering of the temperature; it was still far from normal, but finally was not more than thirty-nine degrees; nevertheless, the patient was still delirious during the night, the faintness and labored breathing continued, and the frequency of the pulse had only fallen eight or ten pulsations, and in addition to this, a fact of importance, the eruption had scarcely made progress. The spots of the preceding day were still in the state of maculæ, the papular aspect failed then entirely, and it was with difficulty that we could find eight or ten pimples more. There was ground this time for being really uneasy, and, without being carried to the point of making an absolutely grave prognosis, I told you that the judgment ought to be suspended. These are the reasons for this reservation of judgment, which I will lay before you.

Remark first, that it is not alone upon the small number of the papules that my apprehensions were founded. In a perfectly benignant variola there will be produced but a very few pustules; if, with this rare eruption twenty-four hours old, we had observed a notable amelioration in the condition of the patient, especially if we had observed a cessation of the fever and an end of the prostration, all would have been well; it would certainly have been a variola both discrete and benign. It is because the bad symptoms of the prodromic period had persisted that the prognosis was becoming serious; this persistence clearly indicated that the eruption was not accomplished, and as in a day it had scarcely progressed, we had to do with one of these always anxious cases in which the organism is impotent to effect the cutaneous determination.

Indeed, it is not sufficient for the variolous eruption to be satisfactory that it should appear opportunely, it is necessary, in addition to this, that it should be normal in its progress; never forget this capital point. If the first condition was fully realized in our patient, in whom the eruption has appeared on the beginning of the fourth day, the second had not the less entirely failed. The eruption of discrete variola ought to show itself, so to say, at one single effort; it ought, at least, to be complete in twenty-four hours, and already at the end of twelve hours the pimples ought to present the papular disposition. Now, on the commencement of the fifth day, new spots had arisen and the first spots were still in the state of maculæ; and twenty-four hours later, on the morning of the sixth day, the eruption was not accomplished; we could discover new spots, and the first in date had scarcely commenced to assume vaguely the papular form. Note also, that in the intervals between and around the spots, there was no appreciable turgescence of the skin, and it did not have the bright rose color which Borsieri compared to that of the Damask rose, and to which he attached so much importance as a favorable sign.

In consequence, the eruption of our patient, normal as to the period of its first appearance, is irregular in its progress, which

has taken place by successive efforts, irregular also by the mildness of the evolution of each spot considered separately. Besides this, the general state was bad, and the dyspnœa and nocturnal delirium persisted, reasons the more for reserving the prognosis.

That is an error, gentlemen, which attaches the idea of danger only to confluent variola. Certainly, nothing is truer than the general proposition that confluent variola is more dangerous than the discrete; but there is a discrete form of variola which is just as grave as the confluent, and which you always ought to think of, in the presence of a discrete variolic exanthem, which progresses badly; this form is that which has been described by Borsieri, under the name of *malignant discrete variola*. Let me give you the principal characteristics, and you will judge for yourselves how it presents analogies with the disease which we are observing this moment. In the first stage, all the ordinary symptoms have an unusual violence, and there is joined to it obstinate insomnia and delirium; or, on the contrary, a profound coma, prostration, and especially an irregular and quick respiration, and the fever is more ardent and more continuous than in the benign discrete cases. On the fourth day the eruption commences, but the spots come out slowly and with difficulty, not following their normal order; to the first spots, which show themselves on the fourth day, there succeed others irregularly on the fifth and sixth days; the illustrious physician, whom I have quoted to you almost literally, was careful to recall to mind the proposition that, in the benignant form, the eruption is accomplished within twenty-four hours. The spots are very slow in development and in growing in height, and the fever does not fall after the eruption. If in the second stage, the delirium, the insomnia, and other abnormal symptoms persist, there is every ground for fear, since generally the patients suddenly die at the commencement of the third period in coma or spasms. There is also frequently observed, either in the first stage or later, a petechial eruption. Such is, in its most striking characteristics, this malignant dis-

crete variola, and it kills more frequently than the confluent, on the eighth or ninth day.

I would ask you if we do not have here a striking tableau of what took place in our patient? In fact, all the grave signs given by Borsieri, we have had under our eyes; the eruption by successive steps, and the slow development of the spots upon which he principally insisted, the persistence of the delirium, the anxious respiration, and the continuation of the fever, were all here, the danger was real, our fears were legitimate. They had been greater still, if I had not found in the individual conditions of this woman certain peculiarities which appeared to me to lessen the unfavorable indications in her condition; we have had here one of those cases in which the clinical individuality ought to modify the absolute rules of pathology. Only to consider the morbid species of the disease with which this woman is afflicted, and we ought to consider her lost, discrete malignant variola rarely lets one escape; but on taking into account the peculiar conditions of the patient, and we will perhaps find some plausible reason for modifying the severity of our decree.

This woman, who is a domestic servant, has recently been waiting upon her mistresss, uffering with confluent small-pox, and whom she saw die six days before she herself was taken down; struck by the death, she deemed herself lost when she herself was taken. During the day the image and the remembrance of her dying mistress did not quit her for an instaant, and when the night with its shadows brought its oppressive fancies, these sinister ideas were the dominant trait of her delirium. The moral situation of this woman has been, then, from the beginning, as bad as possible, and there is here—think well of it—a prime element influencing, from the beginning, the form and issue of diseases. The physical situation was not more favorable; this poor girl has been veritably overwhelmed; she has done all of her ordinary work, and then after that, passed her nights with her mistress; after this it was necessary to proceed with a general cleaning up of the house,

and, in brief, she had exhausted her strength, and was about succumbing to her hard work when she fell sick. Very well, it was to these very special extrinsic conditions that I attribute the form and the abnormal march of the variola; it is not by virtue of a pernicious property appertaining to it that the malady is malignant; if it is overwhelming in its termination, and irregular in its progress, it is solely because of the bad conditions of the organism which it has seized upon; exhausted, morally and physically, the individual is impotent to accomplish the abnormal work which is imposed upon her—observe that. In this case, then, the figurative conception which attributes a bad character to malignant maladies, *morbus mali moris,* is not realized; and perhaps a rigorous clinical observation would generally conduct to the same conclusion. I am, for my part, very much inclined to transpose from the disease to the patient this formula, so dear to the ancients; the malady being an operation accomplished by the living individual, and not by a being created outside of him, and which seizes him with its character made up in advance, I can very well conceive of a bad organism operating badly, or being insufficient to accomplish its work; but I can less easily conceive of a fictitious being, having no real existence except in the patient, possessed outside of him of a good or bad character. Whatever may be the truth concerning this ontological* notion, it is very certain, in this actual case, that it is not the disease which is bad, it is the patient who has taken her variola under bad conditions; there is here in the gravity of her condition something contingent and accidental which attenuates the danger; it is not the fatal power of a malignant genius which has struck down this woman, it is simply her organism, which is not sufficiently strong to accomplish regularly the development which was originated in her body by the variola poison. We ought not, therefore, to despair and fold our arms under the pretext that the malady is

* The word "ontology" (ontologic) was introduced into medicine by Broussais, to express the idea of pathological phenomena being dissociated from the ordinary physiological phenomena of life. [Note by the translator.]

malignant. We ought to come forward and supplement by therapeutics the accidental powerlessness of the patient; the danger is less, because it can be combated.

Another circumstance, more exceptional than this, appears to me of a nature to still further mitigate the prognosis; this woman has been vaccinated in her infancy, and bears upon her two arms the traces of this operation. At nine years of age she was seized with variola, and we find on her face, her hands, and upon other parts of her body, the cicatrices which the eruption has left, making her declaration regarding this point certain. However, fourteen years after, as you see, she is again seized with variola; this persistent aptitude of the organism to submit to the action of the virus is very abnormal, and this unusual condition very probably plays a part in the slowness and irregularity of the morbid process.

Such are the divers peculiarities which appeared to me to modify the gravity of the prognosis, although on the sixth day of a discrete variola, the eruption was imperfect, and the general condition of the patient serious. Doubtless you have a presentiment of the treatment which I instituted. From the fifth day, I carried the dose of spirit of mindererus up to 10 grammes, and in the place of administering this salt in a gum-julep, I gave it in the cordial potion of the hospital,* added to 4 grammes of extract of cinchona. I prescribed, in the meantime, 250 grammes of Bordeaux wine in the 24 hours, and morning and evening, I caused sinapisms to be put around the trunk and limbs. This medication was continued for two days, and was in the fullest degree successful. On the morning of the sixth day, the temperature without being normal, had notably fallen, it was 37.6° ; the night had been more tranquil; twelve hours later, the eruption was complete, the first spots were fully papulo-vesicular, the dyspnœa had ceased; the secondary fever had come on at a seasonable time; as well as a slight swelling of the face, and then and from thence the disease made its regular march, the end being not at all changed

* Red wine, 125 grammes; simple syrup, 25; tincture of canella, 8.

by the storm which had troubled the commencement. When the eruption had been accomplished, I ceased the use of sinapisms and the cordial potion, but I continued until the end the administration of the wine and cinchona.

On the fourteenth day, this woman was going on well; her temperature was 37.2°, when great was my surprise, on the morning of the fifteenth day, to learn that she had been seized with delirium during the night; the thermometer registered 41.2°, that is to say, three-tenths less than at the beginning of the pyrexia. An alveo-dental abscess was the cause of these phenomena, which were, however, temporary. By evening the temperature had already fallen to 40°, and on the next day it was down to its normal number. The violence of these accidents, for so small a cause, well demonstrates the peculiar sensibility of this woman to morbid impressions, this is a retrospective justification for the considerations which had inspired our prognosis.

The secondary fever is the *most precocious* diagnostic sign of variola and varioloid; the phenomena of the prodromic period, and the eruption, are the same in the two cases; it is an error to rely on this as a basis for our judgment. The consideration of the date of the vaccination furnishes of itself but a slight basis for presumption; it is well known that the ordinary vaccinal protection is twelve to fifteen years; but this protection may be infinitely longer, as it may be notably shortened, this is a peculiarly individual fact, which is unceasing in its variation. Observe the case of our patient, who contracted her first variola at only nine years after vaccination, and in which the variolic immunity itself wore out at the end of fourteen years. There is no more foundation for marking, as a differential sign, the cutaneous eruptions which sometimes precede the variolic eruption. These manifestations, known under the name of *rash*, present themselves under three forms, the petechial rash, the scarlatiniform rash, and the morbiliform rash. These divers symptoms may be equally observed in variola and varioloid; and their greater frequency in this last disease cannot serve as

a basis for a positive diagnosis. Consequently, in presence of these premonitory cutaneous determinations, it behooves us more than ever to suspend our prognosis, since, without any signification in varioloid, they are one of the most serious indications in variola, this is especially true of the petechial rash, which, according to the observation of all the authors, is one of the greatest phenomena of these malignant variolas known under the name of "the black small-pox." Hold this as certain, there is no means of diagnosis before the secondary fever; in the immense majority of cases, this fever totally fails in varioloid, and when by chance it appears, is always less intense than in the most discrete variola, and endures no longer than twenty-four hours, while it is prolonged to three or four days in variola. This being so, it is of the highest interest, you will perceive, to have a knowledge of the precise epoch of the appearance of the fever, in order that, in doubtful cases, where the prognosis would be entirely changed according as we would have to do with a variola or varioloid, one should know in advance on what day to suspend his diagnosis. For this question, observers do not all give the same response; Borsieri fixed upon the end of the sixteenth day or the commencement of the seventeeth, starting from the dèbut of the malady for the development of the secondary fever in discrete variola. In his masterly study, Professor Trousseau assigned the date at the eighteenth day; this leaves a margin of twenty-four hours, at the least. Of these two assertions, which is the correct one? The thermometer will tell us.

This method of observation permits us to determine rigorously the characteristics of the variolic fever at its different periods, either in the discrete or confluent form; the conclusions I am going to present to you are drawn from the observations of Thomas, and especially those of Richard Leo, whose work is based upon the little epidemic of Leipzig in 1864.* The re-

* Thomas, Ueber die Temperaturverhältnisse bei einigen Affectionen mit rapider Defervescenz (Archiv. der Heilkund, 1864).

R. Leo, Bericht über das Auftreten der Pocken im Jacobs Hospitale za Leipzig (Achiv. der Heilkunde).

sults having a uniformity which guarantees exactitude and constancy. I will put some of the curvatures given by the author before you, and you will see that in their important traits they are precisely like those which an observation of our patient has furnished.

The initial fever of variola is a continually ascending one, that is to say, the temperature increases constantly up to the moment when the maximum is attained, almost the instant this has been attained, it commences decreasing, to return by an almost uninterrupted fall to the normal number, or even below it. Whether it is discrete variola, confluent variola, or a case of varioloid, these characteristics are the same; this ascension besides is very abrupt; in the first twenty-four hours of elevation going a little beyond three degrees, it continues on the next day in a less proportion, still persists on the third day, and presents its maximum in the few hours which precede the appearance of the first spot. Since the heat manifests itself at this maximum for scarcely a half day, and since it commences, so to say, to fall at once, the graphic curvature which represents the march of this initial period, is never a horizontal line; to employ an expression usual under such circumstances, it is never terraced; it is ascendant, then immediately descendant. It is very rare that this fundamental character may be modified; in the five curves of Leo, which embrace the disease in its first day, there is only one which offers a horizontal line *en terrasse* in the prodromic period; all the others are purely ascending, then descending, and reproduce nearly the type which I put before you (fig. I).* You will see the temperature mount uninterruptedly up to 40.5°, then this number has hardly been attained before it commences falling, and in thirty-six hours is down to 36.5; that is to say, below the normal. He has to do here with a varioloid. Sometimes the ascent is broken in its

* This curvature is borrowed from the work of Leo. I have simply reduced to centigrade the numbers of the scale of Réaumer employed by the author, and to render the curvatures comparable to ours, I have only given two curvatures a day, in place of the three or four in the original.

continuity by a morning remission; but even then, the initial curve taken in its entirety figures exactly an ascending progress. This appears very clearly in the other tracing (fig. 2), which shows us likewise a varioloid; on the morning of the second day there is a remission of from one to two degrees, then the curve takes up its ascending march to the evening of the fourth day; it then attains 41°, and in forty-eight hours returns to 36.8°. The thermometric maximum observed by Leo is 41.2°; in our patient we have had 41.5°, and the temperature of the fourth day in the morning has been the same as that of the third day in the evening; hence the exceptional terrace of our tracing. The rapid fall of the temperature coïncidently with the appearance of the first spots ought to be considered as the defervescence, or crisis of the initial fever; the duration of this defervescence is generally thirty-six hours, so that in this short interval one observes in the thermometer the enormous difference of 4.5°; then, as during the twelve or twenty-four hours which follow, the heat falls generally below the normal, the total difference can be five degrees and a quarter in forty-eight or sixty hours. In discrete variola this lowering of the temperature below the physiological number is, so to speak, the rule; it may pass a degree, and it is not rare to see the number 36.2.

Such a fall at the end of the initial fever is rare in the confluent form, but it is not correct to regard as continued the fever of this variola, and then the thermometer redressed this long accredited error. In the confluent, as in the discrete, the initial fever has its defervescence, only this defervescence is less rapid, and consequently attains its minimum point more slowly; commencing on the fourth day in the evening, on the average, it is achieved on the sixth day in the evening, or on the morning of the seventh day, and the temperature then attains the normal number, or remains above it some tenths, rarely falling below it. Among the curvatures given by Leo, five appertain to confluent variola; in one of them the temperature was 40 degrees on the evening of the fourth day; forty-eight hours

later, the defervescence being achieved, it was no more than 36.2°. This number persisted forty-eight hours. In another case, the phenomena having marched in nearly the same manner, the defervescence was no less evident; 41° on the evening of the fourth day, 37.5 on the evening of the sixth; soon after that the temperature was elevated anew. In a third case the fever had other starts, but to be more precise, the critical fall of the initial fever was not less remarkable; 38.9° at the end of the third day, 37.7° on the morning of the fourth, 38 in the evening, and 38 during all the fifth day. As to the two other curvatures of the confluent disease, I will present them to you; you can at a glance appreciate their characteristics. They are examples of slow defervescence; in one (fig. 3) the thermal fall was not complete until the seventh day in the morning; in the other (fig. 4) it was deferred until the eighth day.

To resume, the initial fever of variola is characterized by a rapid, uninterrupted ascent, and a defervescence or crisis, which is equally continuous. The total duration of this period is, on the average, eighty-six to a hundred and eight hours in discrete variola and varioloid; it is longer in coufluent variola, if one chooses to count up the moment when the fall of the defervescence is completed. In that case, the duration of the deferescence is notably shorter than that of the ascension: for variola and varioloid, one may give as the mean three full days for the ascension, and twenty-four to thirty-six hours for the crisis. The defervescence exists in confluent variola as in the discrete, but it declares itself more slowly than in the latter; it does not commence until the end of the fourth day, and it is not completed until the end of forty-eight hours; the curves given above (3 and 4) show that it may be retarded until the seventh or eighth day.

It is probably the retardation of the defervescence in confluent variola which has given origin to the idea of a continued fever in this malady. When one has seen the eruption commence, and the epoch of the fall of the fever in the discrete form pass without amendment of the febrile movement, he can

conclude that the fall is defective. The conclusion may not be correct, but the daily exploration of the temperature can alone demonstrate the error, as has been proven in these latter times.

For the secondary fever the same method of observation gives a full corroboration to Borsieri: in discrete variola, it can manifest itself on the sixteenth day, two of the curvatures of Leo prove this categorically, and in the majority of cases it will appear on the seventh day. I know no tracing which shows the dèbut on the eighth day only. Here is the curvature of our patient (fig. 5); it is easy to see that the secondary ascension commenced on the sixth to the seventh day. Since, on the seventh day in the morning, we have two-tenths more than on the evening of the sixth day. The ascension continued until the eighth day in the evening, it then attained its maximum, and the decrease then commenced, being attained at the morning of the eleventh day; we have not then more than 36.2°. This curvature presents an anomaly which is in accord with the irregular progress of the malady in this particular case; this is the horizontal line or terrace of the fifth day, which has interrupted the defervescence of the initial fever.

In confluent variola, the secondary fever commences soon after the defervescence of the primitive fever is achieved; it is perceived on the seventh day, in the tracing No. 3, and on the eighth day in the following one. In the three other curvatures of this morbid form given by Leo, it is one time on the fifth day, one time on the sixth day, and one time on the eighth day.

This secondary fever is remittent in the discrete variola, and generally sub-continuous in the confluent. The curvature 3, which shows a frank remission from the seventh to the seventeenth day in a confluent variola, is in this respect exceptional. The duration of this secondary fever is four or five days in the discrete, and from six to nine in the confluent; the maximum which has been observed to the present is 40 degrees, and in no case does it equal the maximum of the initial fever, but always remains at least a degree lower.

The secondary fever fails in varioloid; at least there is not a

vestige of it in the curvatures we have before us. Those of Nos. 1 and 2 are characteristic. Here is another (fig. 6), taken from a patient of our service (Saint Charles Ward) which is not less demonstrative. Is it always thus? The number of tracings is not sufficient yet to permit an affirmative.

The precise observations of Leo have made known a new peculiarity concerning confluent variola; there is a third elevation, of temperature at the moment of desiccation. This tertiary fever which appears clearly upon the tracing (No. 4), of the sixteenth day in the evening, or morning of the nineteenth day, is never so high as the preceding: the maximum established by the physician of Leipzig is 39.6°. In discrete variola, there may at this moment be some exacerbations and remissions, but these oscillations do not swerve more than some tenths of a degree from the normal number.

In variola, as in many other febrile diseases, the temperature, in mortal cases, generally increases up to death. One of the observations of the work I have quoted is a striking proof of this phenomenon. It appertains to a case of confluent variola, which, *par parenthesis*, did not kill until the tenth day, contrary to the classic proposition. The initial defervescence was regularly accomplished; the fifth and sixth day had been without fever; secondary fever is lighted up, as is the custom, on the seventh day, and starting from this moment, the heat did not cease to increase up to the tenth day, and the patient succumbed to the colossal temperature of 42.8°.

There, gentlemen, are the characteristics of variolic fever, such as we learn them from a thermometric exploration. You see that this valuable method of observation applied to a malady, all of the clinical phenomena of which seemed to be perfectly known, has nevertheless revealed new and important particulars. It has disengaged with precision the characteristics of the initial fever in the two phases of ascension and defervescence; it has rigorously determined the epoch of the secondary fever; it has proven the existence of a commencing defervescence in confluent variola, and we are thus freed of a

grave fault in prognosis; finally, it has made us aware of the possibility of a tertiary fever in confluent variola. Think now of what this method has already furnished for the study of the morbid states; think of those services which it daily renders us at the bed of the patient, and doubtless you will be convinced, with me, that it liberally recompenses the clinician for the light labor it imposes upon him. I will give a new proof of this in our next conference.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

PROCEEDINGS OF THE LOUISVILLE MEDICO-CHIRURGICAL SOCIETY. [Reported by Drs. LARRABEE and FRANK C. WILSON.]

The Medico-Chirurgical Society met again—President Dr. T. P. Satterwhite in the chair.

After the transaction of necessary business, the consideration of medical topics was entered into with the usual interest.

Dr. Wilson, (on diseases of children), had seen many cases of aphthæ of the mouth in children; had used the sulpho-corbolates, but fell back upon a strong solution of borax, well applied, as the most effectual treatment.

Dr. Satterwhite suggested the use of the sulphites in this disease.

Dr. Brandeis, (on gynæcology), narrated a case of hydatids of the uterus, which was now under treatment. Patient was a lady of 17 or 18 years of age, recently married, and had menstruated twice since. She then ceased to menstruate, and was regarded as pregnant. She was taken ill during Dr. B.'s absence from the city, but employed no physician until his return. Dr. B. immediately called upon her after his return to the city, and was somewhat surprised to find her emaciated and very ill.

She had persistent vomiting, and could retain nothing on her stomach, and the emaciation was probably due to inanition. Her sufferings were additionally increased by an attack of whooping-cough, which she had taken from children in the house. She was unable to walk without being supported, and had frequently fainted from exhaustion. Dr. B. continued to prescribe for her without much benefit—the vomiting keeping up in the meantime—until about two weeks ago, when he was called to her on account of hæmorrhage from the uterus. The bleeding was not alarming—no clots—neck of uterus usual size, os not patulous, and by rest and opiates the hæmorrhage was checked, and the vomiting yielded to hydrocyanic acid. The abdomen was considerably more enlarged than was usual at her time, and some signs of quickening were daily looked for; a few days ago, however, the Doctor was again sent for, and at this time he found the hæmorrhage very considerable. The os was open, and digital examination revealed an irregular, presenting surface, causing a suspicion in the Doctor's mind of placenta prævia. Dr. B. ordered ergot in repeated doses—by which the pains were much increased—and in a few hours she gave birth to a large mass of hydatids. A careful examination detected some remains still in the uterus, but all hæmorrhage ceased from that time, and the patient was advised to continue the use of ergot. Dr. B. did not allude to the case of hydatids-utero on account of its being merely a case of such disease. He was aware that such cases were common enough to us all, but on account of the most distressing and persistent vomiting which was associated with it.

Dr. Gaillard then gave the result of his very interesting case, previously reported in the proceedings published in a previous number of this Journal. Since the first report, circumstances had occurred which served to throw new light upon the pathology. A short time after the report of the case, the patient was removed to St. Joseph's Infirmary, a trocar plunged into the right thorax, pus found, and the opening enlarged by trephining one of the ribs. The matter discharged was exceed-

ingly offensive; some of it, however, having the appearance of laudable pus. An immense ulcer was found to occupy almost the whole lung. Dr. Holloway operated.

After the operation, he seemed to do well, the cavity being daily washed out with disinfectant fluids, sometimes carbolic acid, and sometimes chloride of zinc.

While thus doing tolerably well, so far as the thoracic trouble was concerned, he was seized with a diarrhœa, which became profuse; and, in ten days from the operation, he sank and died. Unavailing efforts were made to obtain a post-mortem in this case, consequently the connection between the lung and the liver, as well as much knowledge important to the Profession in such a case, remains a mystery. In reply to a question from Dr. Octerlony, Dr. G. thought the abscess formed in the parenchyma of the lung.

Dr. Octerlony had recently treated a case showing the toxic effect of bromide of potassium. The patient was a man of 70 years, having suffered for several years from a chronic bronchitis; cough was the most distressing symptom, coming on in paroxysms so severe and lengthened as to completely prostrate him. For this trouble, and to procure sleep, he had taken large quantities of morphia, which had done little for him, except to injure his appetite and digestion. Dr. O. stopped the morphia and put him upon the bromide of potassium in ℥ss. doses. Of these he would take one, sometimes two, and even so high as three, of an evening before retiring, with the effect of relieving the cough and inducing sleep. For the profuse bronchorrhœa, tr. iodine and carbolic acid were used with the atomizer, and were of benefit. At the expiration of ten days, the cough had entirely disappeared. He slept almost continuously, so that the bromide was ordered to be stopped for forty-eight hours, no cough appearing in the meantime. There was loss of memory, and he constantly muttered, appearing to be living about twenty years back in his lifetime. His articulation was also difficult and bad. After a few days these feelings and symptoms passed away, leaving the cough almost completely cured. Instead of

putting him again upon the bromide, Dr. O. gave him codeia, which had a very happy effect.

In reply to a question as to how much of the bromide had been taken, Dr. O. thought, in all, about 300 grs. There was no uræmia in the case.

Dr. Forrester reported the case of a man, aged about 60, who had sustained an injury of the foot by a street car, so slight as hardly to be noticed at the time. After some time an ulcer formed on the outside of the left heel, including the malleolus. Dr. F. was summoned to him for difficulty in breathing, and, upon examination, found the right lung œdematous, the right side of thorax, right arm, and the right leg, the œdema being confined strictly to the right side. There was considerable dyspnœa, the sputa being also somewhat bloody. There was partial suppression of urine—only about two ounces being passed in the twenty-four hours—and that was albuminous, though no casts could be discovered in it.

Dr. F. purged him, gave iron internally, and applied dry cups to the chest—much improvement seeming to follow this treatment. The heart was considerably enlarged, though no valvular murmur could be heard.

Dr. Octerlony stated that this called to mind a case now under his treatment, in which heart disease had been diagnosed sometime before. Dr. O. was called suddenly to see him on account of alarming symptoms. He found much œdema, suppression of urine, nausea, a small irregular pulse, heart much enlarged, impulse plainly visible in the epigastric region, and apex-beat not well defined. There was no audible organic murmur. He was ordered to have stimulants for the immediate symptoms, and to take iron and digitalis, which latter combination was vomited, and ordered to be discontinued. As the urine increased under treatment it was examined, and found to contain no casts. Dr. O. considered it a case of fatty degeneration of the heart.

Several members, in speaking of Dr. Forrester's case, could not trace any connection between the injury or ulcer upon the

left extremity and the symptoms of œdema, etc., upon the right side.

Dr. Forrester remarked, that he was perfectly well so far as his feelings indicated previous to the injury. He also spoke of the increase in the size of the heart as age advances (which is more common in men than in women), and thought the enlargement might be physiological, not pathological.

Dr. Gaillard, in view of the rapidity of the symptoms, the man having been well up to a short time previous, was inclined to adopt the physiological view.

Dr. Larrabee believed that it was the exception, and not the rule, for people to die suddenly with heart disease, notwithstanding the popular opinion in regard to it. He knew of many well-marked cases of organic disease of the heart in which the discovery was only accidentally made by the applicant being examined for life insurance or for military service. Dr. L. spoke of the case of a relative who made application for life insurance and was rejected. As he had always boasted of his excellent health and fine muscular development, he demanded to know the cause of his rejection, and was perfectly astonished to learn that he had valvular disease of the heart. After that he became anxious about himself, gave up business for a while, and was always thinking of it.

Dr. Brandeis mentioned a case which he had attended with Dr. L. Rogers. While in Dr. R.'s office, a gentleman called to be examined, because his wife desired to know the cause of the noise she constantly heard while sleeping with him. Invited by Dr. R. to listen to the heart, he there heard the loudest aortic murmur he ever remembered to have met with, dependent upon aortic stenosis. Dr. Brandeis thought Dr. Larrabee's statement in regard to sudden death to be to the point, and would like to hear an expression of opinion by the other members.

Dr. Brandeis gave a short synopsis of the different organic diseases of the heart and their effects. Some cases of heart disease terminate in dropsy, some in apoplexy, and others in rupture. If the right side of the heart is the seat of the dis-

ease, the tricuspid valve being insufficient, œdema and cyanosis follow more rapidly than in any other form of valvular disease. In mitral disease there is more danger from hyperæmia of the lungs. If there is aortic stenosis, followed by hypertrophy of the ventricle with dilatation, rupture is liable to occur.

Dr. Gaillard stated that very prominent London physicians, with extensive practice, had never seen a case of disease of the right side of the heart. Dr. Tanner testifies similarly.

Dr. Brandeis spoke of venous pulsation as diagnostic of this form of heart disease.

Dr. Gaillard quoted Dr. Flint, Jr., as maintaining that the patulence of the tricuspid valves was physiological, a provision against the occurrence of pulmonary apoplexy, etc..

Dr. Octerlony felt satisfied that his experience in the dead-house showed a number of cases of disease of the right heart.

Dr. Saffray stated that both Beclard and Flint, Jr., maintained that insufficiency of the tricuspid valves is a physiological condition.

Dr. Gaillard quoted Dr. Flint, Sr., that physicians are culpable if they tell their patients that they have heart disease, as so few, comparatively, die suddenly.

ART. II—IRRIGATIONS OF ICE-WATER AS A MEANS OF ARRESTING HÆMORRHAGE IN CASES OF PLACENTA PRÆVIA. [Read before the Montgomery Medical and Surgical Society. By W. O. BALDWIN, M. D. Published by order of the Society.]

There is perhaps no complication ever encountered in obstetrics calculated to produce in the mind of the accoucheur more anxiety and embarrassment than that of prævial placenta. Through, however, the contributions of many distinguished minds within the last few years, and especially through that of Dr. Robert Barnes, of London, our literature may now be said to be as full and complete on this subject as on any other con-

nected with operative midwifery. In fields, therefore, where such reapers have so recently gleaned and gathered for our garners such rich and valued stores, the harvest must be scant indeed for him who would attempt to follow them. I do not, then, propose to give you an essay on this subject, but desire simply to narrate a case in which, among other means, I adopted a procedure which I am not aware has heretofore been resorted to in similar cases. And as this case, in many respects, possesses an unusual degree of interest to me, I propose to review it for you, and hope you will pardon me if the details are unusually minute.

Case.—I was called about 8 o'clock on the morning of September 11, 1871, to see Mrs. ——, white, aged about twenty-five years. I found her near the end of the seventh month of her fourth pregnancy. I had attended her in her other parturitions, which were natural, except the first, which required the use of the forceps. She is below medium stature, rather delicate, but generally healthy, and possesses a well-formed pelvis. I found a very active flow of blood, and, as is very natural in cases of hæmorrhage coming on under such circumstances, I immediately suspected a placental presentation. After removing several very large clots from the vagina, I proceeded very cautiously to examine the condition of the womb. There was little or no dilatation of the os, perhaps not sufficient to enable me to introduce the index finger, which I did not attempt, however, in consequence of the very considerable amount of hæmorrhage going on at the time. From the large, pulpy and spongy mass to be felt through the walls of the uterus, and from my inability to feel any portion of the fœtus, taken in connection with the flooding and the stage of pregnancy, I was very well convinced of the nature of the case I had to deal with, and that it was one of cervico-orificial or central placenta.

By the introduction into the vagina of large, cylindrical pieces of ice well smoothed, the application of bags of ice on the lower part of the abdomen, and finally by the introduction

of the tampon, the violence of the hæmorrhage was arrested in a few hours. The tampon was removed at the end of six hours, and the flow, though still continuing for thirty-six hours, at intervals, was so modified as to quantity as not to require its re-introduction. I therefore enjoined perfect rest in the horizontal position, and, after two or three days, the discharge having entirely ceased, the patient was allowed to be up and about her room, but advised to be careful of her movements, and not to attempt to walk up or down stairs.

On the first convenient occasion after this, I remarked to the husband the nature and gravity of my apprehensions as to his wife's condition, telling him she would be liable to a return of this hæmorrhage at any time until the termination of pregnancy, and advising him to inform me without delay upon its recurrence.

Accordingly, about 4 o'clock on the morning of the 19th, being eight days after the commencement of the first hæmorrhage, I was again summoned. This time the flooding commenced during sleep. I found her condition much as before, except the loss of blood had been greater, the surface pale, and the pulse increased in frequency. Being confirmed by the recurrence of the hæmorrhage in my former diagnosis, my examination again was slight, from the fact that the flow of blood was greatly increased by the touch of the finger. The appliances used on the former occasion were again resorted to, but this time not with the same results. The flow was occasionally modified to an extent sufficient to bring about reäction and induce the belief or encourage the hope that the trouble was passing off for the time, but only to be followed in a few hours by an increased and alarming flow. About 8 o'clock P. M., however, the flooding seemed to stop entirely, as after the removal of all clots from the vagina no fresh blood could be perceived. I then introduced a tampon composed of two ordinary-sized handkerchiefs pressed gently but firmly against the os, and, being quite unwell myself, left, with the request that if the hæmorrhage should again return, they would summon my

partner, Dr. J. M. Williams, who had already seen the patient with me.

Both Dr. Williams and myself were summoned about 11 o'clock at night, and, on arriving, found the flooding again excessive and passing through the tampon freely. The tampon and many clots were removed, and the vagina again packed with ice. From this the flooding seemed to stop, and within an hour ceased entirely. I then introduced a fresh tampon and left her, Dr. Williams remaining through the night. About 6 o'clock the next morning, the Doctor called at my house to say there had been no violent flooding through the balance of the night, though there was some blood still oozing through the tampon. I was, consequently, in no haste to make my visit, and did not see the patient until 8 o'clock A. M. When I arrived, I found the hæmorrhage again alarming, and blood was passing through the tampon in sufficient quantities to form large clots in the bed. Pulse was 115, and patient looking pale and complaining of weakness. I again removed the tampon, cleansed the vagina of all clots, drew off the urine, filled the vagina with ice, and continued the ice-bag over the lower part of the abdomen, which had never been abandoned since 4 o'clock of the morning previous.

I now began to despair both of my ability to control the hæmorrhage or of the possibility that nature would effect an expulsion in time to save the life of the patient. The hæmorrhage, though slightly modified at times, still continued to an alarming extent, and the failing condition of the pulse, with other symptoms of exhaustion, together with my knowledge of the very large amount of blood already lost, was such as to cause me to apprehend a mortal syncope at any moment, and to induce the belief that the only safety for my patient was in a prompt and forcible delivery. I therefore, at 11 o'clock A. M., revealed to the family my anxiety about the case, and fully advised them of the dangers attending it, as well as of the gravity of the procedure which I proposed for her relief, assuring them at the same time of my conviction, that to wait longer upon

remedies which had, so far, proved inefficient, or upon the tardy powers of nature, would be to abandon her to almost certain death. Pulse at this stage 150 and very feeble.

Let me remark here that this case, more than any I ever had in my life, taught me to admire the resistant powers of nature. She lost an *immense* quantity of blood during the thirty hours that the hæmorrhage had been going on, and I believe if she had lost one-half this quantity in any three or four hours of this time, she certainly would have succumbed. But by frequently arresting the hæmorrhage, and giving nature time to reärrange and adjust her forces, she was enabled to stand without fatal collapse almost incredible losses.

I now believed that active interference was necessary, and preparatory to determining the particular procedure which I would adopt, I introduced the index finger into the cervix and found my first diagnosis fully verified—discovering the placenta implanted directly over the cervix-uteri, and rising, so far as I could judge, nearly equally upon the surface of the cervical zone. No portion of the fœtus could be felt.

This examination produced a very considerable increase in the flow of blood, which caused me again to pack the vagina with ice. I then gave 30 grs. of ergot, and requested that my friends, Drs. Williams, Weatherly, and Michel, should be sent for, and proceeded to make preparations for delivery by version. When my professional friends arrived, I stated to them the nature of the case and the procedure which I intended to adopt, telling them that in consequence of the already exhausted condition of the patient, and the liability to increased hæmorrhage on the slightest touch, I could not permit an examination by either of them. In all of which they readily acquiesced.

Among the preparations which I had made for delivery, was to have at hand a set of Barnes's elastic dilators, with a Davidson's syringe adjusted, with a bowl of water about the temperature of the room. Besides this, I had *another* Davidson's syringe, with the long nozzle, used for vaginal injections, attached, and this I had placed in a bowl of *ice water—as cold as*

it could be made. The patient was then placed in position by drawing the hips to the edge of the bed, with one of my medical friends on either side, each supporting a foot and knee, and flexing the thighs upon the abdomen. I then introduced my whole hand, previously well oiled, into the vagina. The os readily admitted the index finger, and was found dilatable. Flexing the other fingers upon the palm, the hand was pressed firmly up against the os to prevent further loss of blood, whilst, with as much quickness as possible, I introduced by the side of the index finger the largest size of Barnes's elastic bags or dilators, on a director held in the left hand. After getting this in position by passing the upper portion entirely within the cervix, leaving about one-third outside the os, I requested Dr. Michel, who had charge of the pump, to inject the water as rapidly as possible until the os was put upon the stretch. This was the work of but a few seconds, when I withdrew the finger to the external os, where I held it to guard the dilator and prevent its getting out of position. Thus, with the dilator still resting on the point of the director, held in the left hand, and guarded in its position by the right, we were enabled gradually to inflate it with water until I was satisfied it had expanded the os to a size sufficient to admit the hand. At this stage the dilator was partially emptied of its contents and withdrawn, and the right hand immediately passed in to occupy its place. The fingers were then directed to the left side of the womb, separating the placenta from its attachments. *Simultaneously with this movement* of the right hand, the long nozzle of the Davidson's syringe was held between the index finger and thumb of the left hand and passed along with the fingers of the right, whilst the pump was rapidly worked by an assistant, and *made to irrigate with the coldest ice water* the lacerated surfaces of the womb and placenta, *completely controlling the hæmorrhage from both.* The hand was passed above and beyond the placenta, the membranes ruptured at the fundus, the feet of the fœtus grasped and brought down, and the labor soon and safely terminated, with a living child. The engraving furnished illustrates

the procedure at the most delicate stage of the operation.

The time occupied in the delivery was about twenty minutes from the moment of placing the patient in position, most of which was consumed in dilating the os. From the time the hand was passed into the womb until the body of the child was delivered, was about three minutes. Considerable delay occurred in delivery of the head, which occupied about five minutes. Up to the time when the body was drawn into the lower strait, and the lower extremities entirely delivered, the manipulations were executed with as much rapidity as was deemed consistent with precision, in view of the danger to the mother from further loss of blood. When this stage was reached, and the mother therefore considered free from the danger of further hæmorrhage, the safety of the child was looked to. Finding the fœtus still alive through its efforts to breathe whilst the head was still within the inferior strait, and the cord pulsating, I passed the index finger within its mouth, in order to depress the chin and supply it with air, until the head could be delivered. Immediately following the delivery of the head, a very large quantity of water escaped about the temperature of ordinary well water, in consequence of much of the ice water passing up beyond the placenta and mingling with the amniotic fluid. The presence of this additional amount of water in the womb greatly facilitated both the ease with which the feet were secured and version effected.

Except a few fugitive pains complained of during the first hæmorrhage, and on the first day of the second, there were no uterine pains. My hand could not feel the slightest contraction during all the manipulations, nor did I perceive any until after version had been effected and the body delivered.

The after-birth was delivered without trouble by Dr. Weatherly, the womb contracted firmly, and no further hæmorrhage ensued. The loss of blood during the operation was very trifling. Chloroform was not administered, through fear of its relaxing and depressing effects, and the danger thereby of adding to the hæmorrhage. The mother came through the ordeal in fine

spirits, though showing much depression after the excitement consequent upon a returning feeling of safety had passed off. Her pulse was 160 and feeble, and continued at this for four or five hours, when reäction promptly followed a hypodermic dose of morphine administered by Dr. Williams. Except a painful intercostal neuralgia on the fourth day, which lasted only six or eight hours, she has not had an unpleasant symptom. The lochial discharge was natural, the milk came freely on the third day, on the tenth she was able to sit up, and wanted to leave her bed, and she is now in perfect health. The infant weighed five pounds with its clothes on, and took the breast kindly. It weighed eight and a half pounds at the end of the first month, and is now thriving and doing well.

The feature of the greatest interest in this case was the very small amount of blood lost during the manipulation, whilst dilating the womb, and in separating the placenta and in turning. In the first of these stages, that of dilating the os, this result was due to the use of that admirable invention of Dr. Barnes (his elastic dilators), which cannot be two highly commended in this and many other obstetrical troubles in which I have had occasion to use them. In the second and third stages, or those of separating the placenta from the womb and turning, the very small amount of blood lost was evidently due to the *free* application of *ice water thrown pari-passu* with the fingers as they were made to tear asunder the large sinuses and other blood vessels, thus deluging and constringing their open mouths before any considerable amount of blood could be thrown out.

Whilst I am prepared to concede the greatest merit to Barnes's dilators, and acknowledge the invaluable aid rendered by them in this case, and feel that no obstetrician should be without them, I am yet quite sure that it did not separate the the attachment of the placenta in this instance to the extent claimed for it in others. After it was withdrawn and the hand introduced into the womb, there was found a considerable adhesion of the placenta still to be separated, and but for the action of the intensely cold water in constringing the open mouths

of the blood vessels at the very instant that they were severed by the hand, there must have been a considerable loss of blood, which, in the then exhausted condition of the patient, would in all probability have proved fatal. It was supposed by myself and the other physicians present that the quantity of blood lost during the whole operation did not exceed one or two ounces, and we did not think she could have survived a loss much in excess of this. There have been, no doubt, many cases of prævial placenta in which the life of the mother has been lost in consequence of the hæmorrhage occurring during the operative procedure resorted to for relief. In such cases I can but think that irrigations of ice water, as practiced in the above case, will be of the greatest service in controlling the loss of blood, over which it seems to possess advantages not within the reach of any other agents or appliances, and which in no wise interferes with any other means that may be resorted to in conjunction with it.

For the application of this remedy, I improvised an instrument, as stated, in the use of Davidson's syringe with the vaginal nozzle attached. This contrivance answered the purpose very well, but could be improved by making the nozzle about two inches longer, as shown in the diagram.

Had I used irrigations of ice water in the first stages of hæmorrhage in this case instead of packing the vagina with ice, I believe I could have saved the loss of much blood, from the fact that cold can be conveyed in water to places where solid ice cannot penetrate ; and in similar cases, or indeed in almost any cases of serious uterine hæmorrhage, I would advise this procedure as preferable to applications of solid ice.

I am greatly averse to anything approaching hyperbole in speaking of the action of remedies, but so much was I gratified with the facility with which this case was managed and conducted to a favorable termination, through the assistance afforded by the agents employed, that I must say, with the aid of Barnes's dilators and the judicious use of ice water in the hands of a skillful manipulator, I am persuaded that the cases

must be very exceptional where the mother, or even the child, if viable, ought to be lost.

Whilst on this subject, it may not be uninteresting to you, as a matter of local statistics, for me to say, that with a moderately large obstetrical practice for one engaged exclusively in private practice, I have had in my whole life but four (4) cases of placenta prævia. Two of these were latero-cervical placentas, the other two cervico-orificial or central placentas. Two of them were delivered per vias naturales, the other two by version. All of the mothers were saved. Of the infants, one was not at a viable age, and therefore should not be counted in the rate of mortality. Of the other three, two were premature, and one at full time. Of these, two were saved—one was lost.

In this connection, Mr. Editor, I beg to refer to another very satisfactory use which I have made of ice water in obstetrical practice, and which, though not new or original, I do not think is as generally known or appreciated as it should be. I allude to injections of ice water into the placenta as a means of preventing post-partum hæmorrhages in cases where this complication has been habitual in previous labors.

I will not consume your space by giving in detail my experience with this class of cases, but will state, generally, that some years since it so happened that I had in expectancy, at the same time, the accouchement of several ladies, whom, in their last preceding labors, had flooded to an alarming extent two or three hours subsequent to natural and easy deliveries. So threatening and so nearly fatal had these hæmorrhages been that the approaching events were now looked to with the greatest anxiety and dread; and when I received the advanced notice that my services would be required, I was requested to make special preparations for this emergency. One of these ladies had flooded to syncope in each of her last confinements, two of which had been attended by myself, when she seemed barely to have escaped a fatal result, after the most faithful and energetic use of the usual means for arresting the hæmorrhage and restoring the circulation. Having these cases in view, I

deliberated fully as to the means which I would adopt for the purpose of *preventing* a recurrence of this grave complication in the future, and determined upon the following procedure, which, being attended with the happiest results in the first case in which I used it, was repeated in all subsequent ones with a like favorable termination.

As soon after the delivery of the child as it was proper to do so, I cut the umbilical cord, leaving the placental end free to drain off all the blood which would flow through it. I had at hand a bowl of the coldest ice water and a Davidson's syringe, with the end of the small nozzle shaved down to a size which could readily be introduced into the vein of the cord. This was now done, and the cord secured over the nozzle by wrapping a thread around both. The ball of the syringe was then slowly worked until about a pint of water had been injected into the placenta, when the cord was tied. In a very few minutes violent uterine pains came on, the placenta was expelled with great force, and the womb firmly contracted upon itself. When the placenta had been expelled, it was found to be as cold as if it had been immersed in a tub of cold water for several minutes. No hæmorrhage came on, and no clots were expelled afterwards, the lochial discharge being, in all respects, easy and natural.

This has been the uniform result in all the instances of the kind in which I have since had occasion to use the remedy in this way.

Notwithstanding the grave admonition of Madame Lachapelle and others as to the prolonged use of ice, ice water, or other cold applications about the vagina and womb, I must say that I have used them both freely and persistently, and have never had occasion to notice any of the bad results suggested.

The Central Kentucky Medical Association.

This Association held its fourth regular meeting at Lancaster, on Wednesday, the 17th of January, in the Masonic Hall.

The President, Dr. Spillman, called the house to order at 6 o'clock P. M., and made a few brief, pointed, and telling remarks, setting forth the great importance of medical organizations, and showing the urgent necessity of medical men to labor in united and harmonious efforts for the advancement of a noble science, and for the maintenance of the honor and dignity of a useful and humane calling.

The meeting was opened with prayer by Dr. Adams, after which Dr. Huffman read a lengthy and very interesting paper on syphilis, giving a full and detailed account of its rise and progress, and dwelling, at some length, on its pathology which, he thought, was deserving of every consideration, as the disease was of wide extent, being found among all classes and conditions of men, and often presenting itself under circumstances often calculated to lead astray the inquiring mind.

He adopted the usual division of the disease into primary, secondary, and tertiary, and recommended no active treatment for the first stage, only a preparation of the system by suitable tonics for the onset of the violence of the disease; for the secondary stage, he considered mercury, in some of its forms, the best and most useful of all remedies; and for the third stage, he thought iodide of potassium had better claims than any other remedial agent.

The subject was fully, freely, and profitably discussed—most of the members participating.

Dr. John D. Jackson read an interesting paper, entitled: "A Critique of Lister's Septic Germ Theory and the Use of Carbolic Acid as an Antiseptic in Surgery."

He also exhibited a double spleen of a hog, and some specimens of Chinese medicine, consisting of dried centipedes, snake shed, etc.

Dr. Harlan presented the heart of a negro man who recently died under his charge.

The heart was considerably enlarged, weighing thirty-one ounces, and was also complicated with *aortic aneurism* of the ascending and transverse portions.

The patient suffered intensely from facial neuralgia, and from excited and disturbed action of the heart. He was able till within a short time of his death to take any amount of exercise, could climb fences, cut wood, work in the harvest field, etc.

On motion of Dr. Jackson, the Association was divided into four sections, to report quarterly upon the *progress* of medicine and the allied sciences.

The section on the Practice of Medicine, Physiology and Medical Pathology, was assigned to Garrard county, and Dr. Burdett appointed Chairman, to report at the July meeting, 1872.

The section on Surgery, Anatomy, and Surgical Pathology, was assigned to Boyle county, and Dr. J. D. Jackson appointed Chairman, to report at the October meeting, 1872.

The section on Practice of Midwifery, Gynæcology, and Diseases of Children, was assigned to Lincoln county, and Dr. McRoberts appointed Chairman; report due at January meeting, 1873.

The section on Materia Medica, Therapeutics, Hygiene, and Chemistry, was assigned to Mercer county, and Dr. Forsythe appointed Chairman; report due at April meeting, 1873.

The following-named persons were appointed a committee to solicit, in their respective counties, subscriptions for the relief of the suffering medical men of Chicago: Dr. McRoberts, of Lincoln; Dr. Reid, of Garrard: Dr. Jackson, of Boyle; and Dr. Kyle, of Mercer.

Steps were taken to procure a seal, and have the Association incorporated.

Drs. Brown, Dunlap, Burdett, and Price were appointed delegates to attend the next regular meeting of the Kentucky State Medical Society, to be held at Louisville, April 9th, 1872.

The following officers were elected for the ensuing term of twelve months: President, Dr. H. Brown; Vice-President, Dr. J. M. Reid; Recording Secretary, Dr. A. D. Price; Corresponding Secretary, Dr. W. Huffman; Treasurer, Dr. W. B. Harlan.

The Garrard County Medical Association—a young but promising Society—gave a handsome entertainment, to which

full justice was done by those who know how to appreciate the good things of this life.

The Association adjourned at 1 A. M., to meet at Danville on the third Wednesday in April, on which occasion Dr. Plummer will open the debate on Small-pox.

A. D. PRICE, M. D., Secretary.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

TEHUACANA, Texas, 1872.

Dr. E. S. Gaillard,—I desire, through your Journal, to speak to Dr. B. H. Riggs, of Selma, Ala., in reference to the disease that he published in the June number of the "Richmond and Louisville Medical Journal," and which he styles "A very fatal form of disease that occurred on a plantation four miles from Selma."

Since recently observing sixteen cases of cerebro-spinal meningitis, and in several of them the symptoms so closely resembled those in your cases, I am constrained to think yours to have been a malignant form of cerebro-spinal meningitis. Notwithstanding the absence of the characteristic signs of inflammation of the meninges of the brain and the cord in the subject on which you performed an autopsy.

We are taught by our text-books that cases occasionally occur in which there are no signs of inflammation on post-mortem examination.

I fully believe that many of the more rapid cases die before inflammation occurs; for example, the cases whose duration are from four to fifteen hours. After observing closely the symptoms in several cases that died within fifteen hours, I am induced to think that the poison that produces the disease acts as an irritant to the vaso-motor centre, causing contraction of the arteries and increased blood pressure in the heart, therefore

gradually paralyzing its action and producing passive hyperæmia, or congestion of the lungs, stomach, and liver.

If my theory be correct, and our patients died from a paralyzed heart, we would naturally look for congestion of the lungs, from the fact that in persons dying from mitral regurgitation, we find considerable congestion of the lungs. I think it proper that I should give you the symptoms, treatment, and results of my cases.

Case 1.—Female, aged 9 years. Saw her at 8 o'clock A. M., September 16th, 1871, found her suffering from severe headache, moderate febrile movement, small, corded and fast pulse, pupils dilated, tendency to stupor. She was taken with a chill at 4 o'clock A. M., September 15th; was given dose of cathartic pills, which moved her bowels twice during the night. I administered quinine grs. v. and acid sulph. ar. tr. opium aa. m. v. at 9 A. M; large rose-colored spots occurred on trunk and extremities. At 10 A. M, found her in second convulsion; used cold affusion freely over head. While using the water she ceased to breathe. I resorted to Dr. Hall's method of resuscitating the asphyxiated, when respiration began again. I then plunged her trunk and extremities in warm bath; opened a vein in arm and took fourteen to sixteen ounces blood; died in thirty minutes from time of convulsions. I could not at the time diagnose the disease, but now think it to have been a case of cerebro-spinal meningitis.

Case 2.—Male, student, age 22. Saw him September 29th, 1 o'clock P. M.; disease began with a chill at 4 o'clock A. M.; thought it a case of intermittent fever; prescribed quinine grs. xv., calomel grs. x., blue mass grs. v., made into three pills; one every two hours; bowels moved twice during the night. He awoke the students occupying the same room the latter part of the night; complained of intense cephalagia; sinapism applied to forehead. Saw him again at 8 o'clock A. M. on the 30th; found him in a state of stupor, features contracted, pulse very small; thought him in the algid stage of pernicious fever; applied warmth and friction to extremities, and administered qui-

nine grs. xv., tr. opium m xxx., to be repeated every three hours; 12 o'clock M. reäction taken place; fever high, pulse rapid and strong, delirium. Cold affusion over head, followed by cold compresses; third dose quinine and opium at 3 o'clock P. M. Visited him at 5 o'clock P. M., found him perspiring freely and sleeping.

October 1st, 8 A. M. Continued to perspire throughout the night; skin moist, propped up in bed eating breakfast, apparently rational. Continued former prescription in smaller doses. I neglected to state that vomiting occasionally occurred during the first twenty-four hours. Three P. M., in same condition as I found him during morning visit; left 30 grs. bromide of pot. to be taken at night. October 2d, 7 o'clock A. M., in an active state of delirium, paralysis of oculo-motor, producing ptosis œdema of lid, also dilatation of pupil, contraction of pupil of opposite eye, suffused conjunctivæ, high febrile movement, strong and rapid pulse. Diagnosed the case meningitis. Cold affusion to head; 30 grs. chloral. Sent for Dr. D. W. Booker; venæsection to amount of oij. from temporal artery; not being able to get blood from arm, in few hours coma, in twenty-four hours death.

Case 3d.—Male, student, age 18. Visited him November 9, found him with feeble and rapid pulse, troubled expression, pain in head and right knee, large purple spots over trunk and extremities, injected conjunctivæ, contracted pupils, nausea and vomiting, surface moderately warm. Diagnosis cerebro-spinal meningitis. Sent for Dr. Booker. Was taken with a chill at 4 o'clock A. M., November 8th; was given by his mother dose of cathartic pills, which moved his bowels twice during the night. Treatment—cold to head, large dose calomel, quinine grs. 8, morphine gr. $\frac{1}{3}$, hypodermically to be repeated every 3 or 4 hours, blister over spine; reäction with high febrile movement, rapid and strong pulse, delirium, coma, and death November 11th.

Cases 4, 6, 7, occurred November 12, 18, 19. Taken with chill during night, with intense cephalagia and rachialgia, vom-

iting, pulse soon becoming feeble and growing smaller, injected conjunctivæ, contracted pupils, stupor, coma, and death, purpuric spots, death occurring in fifteen hours. Treatment—calomel, brandy, and ammonia, freely, sinapisms to spine and extremities, wet cups to temples, morphia hypodermically; no impression made on pulse. These cases resemble yours.

Case 5.—Male; student, age 16; November 12th, was taken with a chill during the night of the 9th, followed with pain in the head and back; in a few days opisthotonos, delirium, moderate febrile movement, pulse 120 and corded. Calomel and quinine kept up by Dr. T. C. Poole for three days; after which Dr. Booker and myself saw him. Prescription continued twenty-four hours longer. Fourth day prescription changed to bromide and iodide pot. in 8 gr. doses every three to four hours, with blister over spinal column. Tenth day quinine and iron in addition; whisky freely with nourishing diet from the fourth day. At the expiration of thirty days was carried home by parents, distance thirty or forty miles. He is not well. May never recover.

My preceptor, Dr. J. Jones, Professor of Chem. University La. Med. Dept., stated in one of his lectures that he thought it to be a kind Providence to take off some persons with cerebro-spinal meningitis after inflammation and effusion occur. I am not sure but No. 5 would have been better off to have passed away like the others.

Case 8.—Rev. A. Yonng, age 55 or 60; November 20th, was taken at 9 o'clock P. M. with a rigor not attended with subjective sensation of cold; in half hour with severe pain in left lumbar region. Dr. Booker and myself saw him at 10 o'clock P. M., pulse slow but moderately full, pain in the left lumbar region intense. I gave him ½ gr. morphia hypodermically; by 11 o'clock P. M.; pain not relieved, pulse decreasing in volume, conjunctivæ considerably injected, apparently losing his sight. Administered brandy 6 oz., venæsection 35 to 40 oz., producing symptoms of syncope, and repeated in five hours to same extent. Pain relieved, sight improved, head felt clearer. Blister

over spinal column. Pain returned. Dr. Booker administered two-thirds of a grain of morphia hypodermically; relieved in fifteen or twenty minutes. Fifteen grains of calomel were given when we saw him, and continued in 2-grain doses every three hours throughout the night and during next day. After treatment, as symptoms demanded; rapid recovery.

Case 9.—Colored male, age 11 years, November 22d. Was taken during the night with a chill. Saw him twelve hours after chill, pulse small, conjunctivæ injected, pupils contracted, stupid, passed into coma during the night, died next morning. He was in charge of an irregular practitioner. Know not the remedies used.

Case 10.—Male, age forty or forty-five years. December 1st, was taken with chill, intense cephalalgia and rachialgia before daylight, nausea and vomiting occasionally, was given dose cathartic pills by his wife; bowels moved two or three times. She says that his pulse was strong and full during day, with tendency to stupor. Perspired freely towards night.

Saw him December 2d, 9 o'clock A. M., with Drs. Poole and Booker. Pulse small and fast; severe pain in head and back; also in region of heart; pupils contracted somewhat; conjunctivæ injected; nausea and vomiting, tongue not coated, red and smooth around edges and tip; same character of tongue in most of the other cases. Treatment, bloodletting to symptoms of syncope, and repeated to same extent in six hours. Calomel, Dover's powders, and quinine every three hours. Brandy and ammonia freely; blister over spinal column. The pulse was so feeble at times during interval of bloodletting, that it could not be detected at wrist. After last bleeding pulse improved, and by 8 o'clock P. M. condition was greatly improved. Continued to do well until fourth day after chill. Pneumonitis developed itself in posterior part of lower lobe of left lung, extending itself by the sixth day so as to involve two-thirds of lung. On 15th is convalescing.

Cases 11, 12, 13, 14, 15, and 16; all of a mild form, two or three Niemeyer's abortive type. Treatment: Of the mild

cases, mercury, iodide and bromide potass., alcohol and opiates, or chloral, sinapisms and blisters; the abortive cases calomel principally.

Constipation and expectoration of mucus and blood are constant symptoms of the mild cases as well as grave. I will recapitulate most ordinary symptoms and my idea of treatment in the grave cases. No premonitory symptoms, ushered in with chill, severe cephalalgia and rachialgia, vomiting, pulse small, moderately fast, growing less in volume, moderate warmth of surface, injected conjunctivæ, contracted pupils, stupor, coma, and death. Treatment, copious venæsection, large dose calomel, brandy and ammonia freely, sinapism or blister over spinal column, morphia hypodermically when indicated.

I have much confidence in bloodletting during first few hours of disease, by such means we relieve the labor of heart that is being gradually paralyzed, remove the passive hyperæmia or congestion of the lungs, stomach, and liver, also of the meninges of brain and cord, and last but not least, take away a large portion of the poison circulating throughout the system. I do not think that the more fatal cases appropriated any of the medicines taken by the stomach.

Many will ask the question, and very properly, How are we to diagnose the disease during the first few hours of its existence? My answer is, that you will not until you have observed a few cases in the beginning of an epidemic.

My excuse to the Profession for not having taken the temperature of my patients, is that I have broken my thermometer a few months since. Circumstances were so unfavorable that I could not view the circulation of the choroid and retina with any satisfaction. I made an attempt in two patients, but bad lights and contracted pupils rendered it unsatisfactory.

London, 1872.

Dear Sir,—I do not think I can do better than give you a short account of this "day's doings" among the Obstetricians and Gynæcologists of this city. As is my custom, I went this

afternoon at 2 o'clock to the Samaritan Free Hospital, and there, for the first time, met Dr. Routh, who I saw remove a portion of the cervix-uteri in a case of elongation of that part of the organ. His operation consisted of first dissecting through the mucous membrane with the knife, after which completing the amputation with scissors. The edges were then brought together with stout silk sutures, and the vagina tamponed with dry cotton, the Doctor giving preference to this mode, where cases would admit of it, because he thought the surface healed more rapidly, and there was less local and constitutional disturbance than by any other plan. Immediately after, Dr. Spencer Wells performed the operation of ovariotomy (I think his 454th case). The patient was 17 years of age, and rather delicate in appearance—more of the history of the case I did not learn, as operators here are not in the habit of talking much to the lockers on. Indeed, Dr. Wells seldom speaks at all. The incision was about three and a half inches in length; the tumor, which was multilocular, was filled with a dark-brown liquid; the adhesions were slight, those of the omentum comprising all. On removing the tumor from the abdomen, the clamp was applied, and the pedicle cut just above it. Great care was taken to ligate every bleeding point of the omentum; the ligatures were carefully tied, and then cut off close. Dr. W. remarked that the omentum would stand rough handling, providing all hæmorrhage from it was checked. The abdomen, after being carefully cleansed, was closed with hemp sutures, which passed completely through the abdominal wall, including the peritoneal lining; between the deep sutures were an equal number of superficial ones that passed only through the skin, thus more thoroughly closing the incision. Small pieces of lint were now placed under the clamp and along the wound, and then larger pads of the same material, after which a thick covering of cotton was applied, and above this four or five strips of adhesive plaster, all being held in position by a broad bandage pinned in front. The whole of the operation was completed without a particle of confusion. The operator

and assistants fully understanding each other, and everything was in place beforehand, thus was accomplished in half an hour what usually takes thrice that length of time.

At 8 o'clock in the evening, by invitation of Dr. Wells, I attended the annual meeting of the London Obstetrical Society. Here, for a stranger to visit a medical society, it is necessary for him to be introduced by one of the members either by card or in person. In addition to official business, which consumed most of the time, a paper by Dr. Playfair, on empyema in children, was read. In it he advocated constant drainage and non-admittance of air into the pleural cavity. This he accomplished by means of an elastic tube passed through the canula by a trocar into the cavity, the outer extremity to be kept continually under water, thus preventing the ingress of air. He reported several cases, with diagrams of the chest, showing how the thoracic walls had fallen in in those cases in which air had gained admittance, and how the rotundity had been preserved when treated by his method. The paper was exceedingly interesting and instructive, and seemed to meet the approval of all.

The Committee on Election, who were out counting the ballots, not being ready to report, Dr. Graily Hewitt introduced the subject of the instruction of women as midwives, the policy of which he strongly advocated, and moved that, to encourage the instruction of women as midwives, a committee be appointed, whose duty should be to examine all women applying, and recommend to the Society for certificate those found competent. The discussion was warmly entered into by Drs. Tyler Smith, J. H. Davis, Hicks, Meadows, Routh, Playfair, and others, all of whom favored the motion, which was unanimously carried.

At this juncture the Election Committee reported Dr. J. Brackston Hicks reëlected President of the Society for the ensuing year. Dr. H., in his address, which was well worded and gracefully delivered, reviewed the work of the past year, and put forth some suggestions for the coming, closing with a short but beautiful eulogy on those members of the Society who had

died during the past year. This finishing the business of the meeting, they adjourned to partake of a sumptuous supper that was spread in an adjoining room.

S. H. Garvin, M. D.

Dr. H. Miller.

Goochland C. H., Va., 1872.

Dr. E. S. Gaillard:

Mr. G.'s infant was taken with intermittent fever when about three weeks old, accompanied by jaundice and considerable pain, apparently in the bowels. The fever, after being stopped with quinine, recurred once or twice, with increase of jaundice, till it was arrested by anticipating the time for recurrence with small doses of quinine. The jaundice, however, continued; but the discoloration of skin was evidently diminishing about the middle of the third month from birth, the discharges from the bowels assuming a more natural color, and the child growing and gaining flesh. At this time it had a slight attack of thrush, easily relieved. Then followed immediately an eruption on the skin of the lower part of the abdomen and scrotum. This lasted a week or ten days, and healed (consisted of minute vesicles with superficial inflammation of the skin). There then appeared, as the mother states, a swelling on the lower part of the abdomen—one on the left thigh and one on the right leg, just below the popliteal space, which she supposed were boils. These, on breaking, discharged blood instead of pus, and after trying in vain to arrest oozing of blood, I was again called to see the child. There was already blood enough lost to make a decided impression on the system, and the hæmorrhage from the abdomen and right leg still continued, though the spot on the left leg had stopped bleeding. On the abdomen the blood, when I saw the child, issued from the centre of a spot about the size of a small chesnut, which was a little elevated and hard to the touch, but apparently not tender. The right leg was swollen and inflamed from the knee to the ankle, which inflammation steadily increased till death. The bleeding point

on this leg was situated in this inflamed area. The only way in which I was able to arrest the hæmorrhage even temporarily, was to press upon the bleeding points with the finger, having under it a thin cloth with the per sulph. iron moistened and smeared on it, and though this pressure was continued without intermission for six or eight hours, when it was removed the hæmorrhage recurred. During the second and third day the child suffered intensely from pain in the inflamed right leg, which nothing would relieve, but allowing the blood to ooze from the bleeding spot, and whenever this was allowed, the child became quiet and slept. Death occurred in about three days and a half, apparently from the exhaustion produced by the hæmorrhage and intense pain. There was no post-mortem examination. The internal treatment consisted in the use of preparations of iron and opium, and acetate of lead.

Now, my object in writing the above is to ask if you can come to any probably correct conclusion, from the very confused history given, as to the cause of the hæmorrhage and inflammation. The child's family, for two generations back, are certainly healthy, nor did it inherit the hæmorrhagic diathesis. In my very limited experience of this disease, it has not been attended by inflammation, which, in this case, seems to have been the initiatory step. I do not think we could diagnose phlebitis.

Niemeyer, in his remarks on jaundice, says that the bile acids, in some cases of jaundice, are absorbed into the blood, and that "these acids possess to a peculiar degree the property of dissolving the red-blood corpuscles." Dr. Wm. T. Walker, who saw the child with me about twelve hours before death, agreed with me in thinking that the action of the bilious matter on the blood was probably the cause of both the inflammation and hæmorrhage. If I had anticipated the occurrence of hæmorrhage and the accompanying inflammation some weeks before their appearance, might not something have been done by putting the child on a treatment of the tinct. sesqui-chlo. or other preparation of iron? I would be glad to know whether

the condition of the blood which seemed to exist in this case is ever caused by jaundice, as I practice in a retired country neighborhood, and find it difficult to keep myself properly informed in these matters.

Very respectfully,
WILLIAM MORRIS, M. D.

SHANNON, MISS., 1872.

Dr. E. S. Gaillard:

Dear Sir,—Your contributor, Dr. Robert E. Peyton, of Fauquier, Va., makes several additions to the—to me heretofore known therapeutic—effects of the cotton root; but in saying he had examined "all the treaties on materia medica and therapeutics he could lay hands on, he only finds it mentioned in Tilden's Journal, Dunglison's Dictionary, and once casually by you in one of your excerpts," he does injustice to the Profession. If he will examine the United States Dispensatory, Twelfth Edition, by Wood & Bache, page 425, he will find the following notice of it:

"The root of the cotton plant has been used by Dr. Bouchelle, of Mississippi, who believes it to be an excellent emmenagogue, and not inferior to ergot in promoting uterine contraction. He stated that it is habitually and effectually resorted to by the slaves of the South for producing abortion, and thinks that it acts in this way without injury to the general health. To assist labor he employs a decoction made by boiling four ounces of the inner bark of the root in a quart of water to a pint, and gives a wine glass full every twenty or thirty minutes. ("West. Jour. of Med. and Sur.," Aug., 1840).

Dr. T. J. Shaw, of Tennessee, thinks it superior in the treatment of amenorrhœa to any other emmenagogue, and equal to ergot as a parturient, while attended with less danger. He uses a tincture made by macerating eight ounces of the dried bark of the root in two pounds of diluted alcohol for two weeks, and gives a drachm three or four times a day. ("Nashville Jour. of Med. and Sur.," July, 1855).

Mr. Weatherly denies the statement that the root is used for

producing abortion among the slaves, at least within his observation. ("Am. Jour. of Pharm").

About the same may be found in Dr. John King's "Eclectic American Dispensatory," page 571.

Few physicians in Mississippi are not cognizant of the above, and I suppose few who can give any additional testimony to its therapeutic value. It is a conceded point here that the slaves used it before the war to produce abortion. I think the Profession should feel itself justified in giving the agent more extensive trial, and reporting its merits or demerits.

Respectfully, W. T. Simonton, M. D.

Columbus, Ga., January 24th, 1872.

Dr. E. S. Gaillard:

My Dear Sir,—Some days since I took the liberty of sending you a paper published from the "Atlanta Medical and Surgical Journal," descriptive of *uterine cloth tents*. I now beg to call your attention to specimens of the tent, which are here enclosed. The samples sent you are both linen and cotton cloth. When a very soft and flexible tent is desired, it is best made of cotton or *old* linen. My opinion is that the linen tents are preferable where depletion by exosmosis is especially desirable. This I conceive to be owing to the greater affinity of linen for water, and hence its greater absorbent action when brought in contact with a moist surface.

In the published paper (which contains, I am aware, many imperfections) I failed to call attention to the use of medicated ointments by means of this tent. Simple cerate, containing such medicinal agents as are desired to be used, may, by means of the cloth tent, be very thoroughly applied to the entire uterine cavity. The ointment may be either of medicinal or caustic strength, as circumstances require.

I am, sir, very respectfully, your obedient servant,

V. H. Taliaferro, M. D.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

HAND-BOOK OF SKIN DISEASES. By Dr. ISIDOR NEUMANN. Translated from the Second German Edition, with Notes, by Lucius D. Bulkley, A. M., M. D., Surgeon to the New York Disp. Dep't of Venereal and Skin Diseases; Member of the New York Dermotological Society, etc., etc. First vol., 8vo., bound in cloth. pp. 467. New York: D. Appleton & Co. 1872.

The appearance of this volume has been eagerly expected by many of our physicians who are unable to consult the original, and whose interest in dermatology makes them desirous of becoming familiar with the views of Hebra, of which Neumann is an exponent. The first volume of Hebra's work has been translated into English under the auspices of the New Sydenham Society, but is inaccessible to most physicians. This translation of Dr. Neumann's book is, therefore, a very timely one, and by the excellent manner in which Dr. Bulkley has performed this difficult task, he has acquired a claim to the respect and gratitude of the English-speaking Medical Profession.

The present volume is the fullest and most satisfactory work on skin diseases within our reach; it gives the most recent and correct views in histology and pathology. It contains sixty-six wood-cuts, photographic copies of the original. Many of them are new, and represent microscopic views in various diseases of the skin. The anatomy of the skin, diagnosis, course and therapeutics of skin diseases are ably discussed in the beginning of the book, and, of course, the vexatious question of classification receives all the attention usually bestowed upon it.

In therapeutics Neumann agrees with Hebra, that by far the greatest value is to be placed upon external treatment in cutaneous diseases.

The translator, however, has compensated for the neglect of internal treatment by the author, and among the excellent notes by the former, are many formulas and comments on the

constitutional treatment recommended by the English and American School of Dermatology. At the close of the book are a number of appendices, containing valuable notes on vaccination, on the vegetable nature of parasites, on the interrelation of the microscopic fungi, etc. A very full and accurate index closes the volume, which, in binding and typography, is highly creditable to the publishers. We notice, with pleasure, that the translation is remarkably free from the disfiguring lapses into a foreign idiom, which cannot be said of many recent translations, either from the German or French.

SKIN DISEASES—THEIR DESCRIPTION, PATHOLOGY, DIAGNOSIS, AND TREATMENT. By TILBURY FOX, M. D., London, M. R. C. P., Fellow of University College, Physician to the Skin Department University College Hospital. First American from last London, Edition. 1 vol., cloth, 8vo., pp. 313. New York: William Wood & Co., 1871.

This handsome volume is a condensed edition of the author's two previous works, "Vegetable Parasitic Diseases" and "Skin Diseases in General."

It is clear, concise, and practical, but it is regretted that a certain carelessness of style which marred the first English edition should still be observed in the second. The sentences are sometimes wretchedly constructed, and the style is often unworthy of the general merits of the book and the author's deservedly high reputation. The simple classification of the College of Physicians has been adopted, and besides a formulary containing 200 prescriptions. The present volume contains an excellent "Glossary."

The interesting subject of parasitic diseases is fully discussed, considering the small bulk of the book, and is well illustrated with wood cuts.

The author's object seems to be to simplify the study of an interesting and important branch of practical medicine, which has been made obscure, difficult, and unattractive by the needless multiplication of terms and numerous complicated classifications. He has succeeded well. The book is practical and

richer in valuable contents than any other book on the subject, of such small bulk.

It is, on the whole, the best hand-book on skin diseases for beginners, and for busy practitioners who have not time to read such elaborate treatises as those of Wilson and Neumann.

Electricity in its Relations to Practical Medicine. By Moritz Meyer, Royal Counsellor of Health, Berlin. Second Revised American Edition from the Third German Edition. By W. A. Hammond, Professor of Diseases of the Mind and Nervous System, Bellevue Hospital Medical College. New York: D. Appleton & Co. 1872.

It is a real service to the Profession to call attention to this work. The therapeutical value of electricity is daily becoming more important and valuable. Nothing is more demanded at the present time than light upon this obscure subject. Candid, practical men demand something simple, tangible, authentic, comprehensible, in this connection. All recognize the almost omnipotent power of electricity, and all feel that properly applied it must be powerful for good; while used ignorantly and unadvisedly, it must be fully as potent for evil. Most of the works, so far published, are filled with technologies uncomprehended save by the specialist; so characterized by electrical formulæ and equations which savor more of the transcendentalisms than the work-a-day applications of medical agencies, that some are unwilling to become severe students of a new science, in order that they may become clinical experimenters; some are skeptical in regard to the practical value of an agent, whose powers and values are usually set forth in the mystic symbols of algebraic expressions; some are aghast at the complex labarynth which none but the accomplished in chemistry can hope to safely investigate.

Such are the feelings and thoughts of most of the actual practitioners of medicine in regard to the clinical and practical applications of electricity. In this vague mist which has enveloped the clinical horizon, a mist more mystic in its surroundings and more weird in its manifestations, than those whose

beautiful description gave immortality to Ossian, it is a positive comfort to find that the practitioner can enjoy the benefits of a work which, in plain, simple language, sets forth all that is most valuable in connection with the therapeutical applications and the clinical results of electricity. This work is translated excellently; the diction is, as a rule, excellent. Nothing better shows the power and completeness of its author than this statement of the translator: "I had intended to enlarge it, but attentive perusal convinced me that by so doing, I would only enlarge the volume without giving it a corresponding increase in value." The uses of the constant current, as originally set forth by the founder of this treatment, Robert Remak, are fully illustrated and explained, and the comparative values of the constant and uninterrupted currents with the indications for their selection and application, are carefully analyzed. One may form a very true and accurate conception of the scope and value of this work, by learning that it gives the history of the application of electricity to medicine; the action of the electric current on all of the organs and tissues of the body; the application of electricity to anatomy, physiology, and pathology; the importance of electricity in the diagnosis and prognosis of paralytic affections; electricity as a curative agent; its uses in medicine; in midwifery; in surgery; in gynæcology, etc. The editor, Prof Hammond, has given increased value to this volume by his contributions in connection with infantile paralysis, and by his accurate description and illustration of the most approved apparatus used at the present time. Indeed, if the practitioner possesses this volume, he will have at his command most that is known of value in connection with medical electricity. The work is printed with rare beauty. The paper, printing, illustrations, and general arrangement are models of excellence. The Appleton's certainly deserve great credit for the evident care and manifest liberality with which their publications are invariably issued. This volume is an octavo of 506 pages; its cost is $4.50—an expenditure which all can make to advantege.

Ovariootmy. By J. Taylor Bradford, M. D., Augusta, Ky.

This paper was read before the State Medical Society in 1857. It will have an increased value, since the death of its author. Dr. Bradford has, it is believed, been the most successful ovariotomist on record. In May, 1869, he had operated twenty-seven times, with three deaths. It is a singular coïncidence that the originator of ovariotomy (Dr. McDowell, of Boyle county), and Dr. Bradford, of Augusta, should have both been Kentuckians. Surely, if her medical sons should lapse into inertia and obscurity, this would be glory sufficient, in the medical field, for this State. Unfortunately, nearly all of the more recent results in connection with this operation in this State have been disastrous.

Dr. James Holloway has recently operated successfully. Dr. James Cowling was announced in the "Courier-Journal" to have operated successfully for double ovariotomy complicated with cancer. In justice to this gentleman (who desires to be just) it should be stated that the operation was "single," and that the woman died very soon after the operation.

It is strange that McDowell and Bradford should have been such distinguished and successful operators, while all others who have really operated to any extent in this State should have met with such disastrous results. The suggestion of Dr. W. H. Newman, recently of this city, but now of Denver, Colorado, is worthy of serious consideration. He suggests that the success of McDowell may have been largely due to the fact, that he operated without using chloroform. Professor N. R. Smith, and others distinguished in surgery, contend that secondary hæmorrhage, shock, septicæmia, are all most marked after operations during which chloroform has been used. With the anæsthetic effect of carbolic locally applied, why should the operator use chloroform, when, to say the least, its use is not necessary, and is, in the judgment of expert and wise surgeons, so often attended with disastrous and avoidable results? This matter is surely entitled to serious consideration.

Report of Western Lunatic Asylum, at Staunton, Va., '71.

This report is a model. Its veteran and accomplished medical superintendent (Dr. F. T. Stribling) is honored and admired by all who know him and the details connected with the admirable Institution which is now in such excellent condition. The report is embellished with an excellent illustration of the Asylum and the grounds surrounding it.

Transactions of the Virginia State Medical Association for 1871.

This Association met October 8th, at Lynchburg. The retiring President (Dr. R. S. Payne) made a creditable speech, and the recently-elected President, Dr. A. M. Fauntleroy, of Staunton, was, as usual, in his remarks brief, terse and vigorous. His native, admitted, and overshadowing modesty is throughout conspicuous. The proceedings were rather bald and uninteresting. The papers are very fair, but it must be, reluctantly and sorrowfully, admitted that they are not very stunning in their scientific value. As a whole, the volume is heavy in its effect; though not in its weight. The members must have felt this and anticipated it by electing their two secretaries. The compositions of these gentlemen are sufficiently amusing and ludicrous to rob the volume of all of its heaviness. Indeed, the face of the reader involuntarily relaxes, and in his laughter over the curiosities of composition claimed by the Secretaries of this Association, he forgets the gloom and grief that overshadowed his mind on the first examination of the volume before him. These reports of the Secretaries are signed by one person each; yet they are written in all the persons known in grammar; the first person singular, the second person singular, and the third person singular; and just as the reader is about convinced that the writer is a most singular person, he is perplexed to find that, by a strange transmutation, the Secretary has suddenly yet naturally become disgusted with his singularity, and seeks change and refuge in the garb of a most Protæan and endless plurality. These compositions make up in

value as literary curiosities all that they lose as specimens of official correctness and propriety.

A very singular feature in the proceedings is a petition from the editors of the "Georgia Medical Companion" to make that publication "the representative journal of the South." The committee to whom this petition was referred, while evidently appreciating the admitted and immeasurable power of their Association, were forced to admit that there was a limit to this power, and that the Association certainly was not potent enough to accomplish the desire of the petitioners. They deemed it inexpedient to pledge any support. Since this adverse report of the committee, the editors of this journal seem to lament the fallen condition of professional men, and have set-to more seriously than ever in their mission to "exhalt" (to use their own phraseology) their medical brethren. It is to be hoped that their fallen medical friends will be restored, by such efforts, to their pristine and former "exhaltation" (as the editors of the "Companion" write), but it must be confessed that such a result is very doubtful; that is if the mathematical law of force and effect being in direct ratio, is not a delusion and a snare.

This Association is doing excellent work, and the friends of progress and efficiency in medicine cannot do otherwise than wish for it a prosperous and fruitful future. The selection of Dr. Fauntleroy as President will accomplish very much in securing such a result. He deserves the honor, and will reflect fully all of the honor conferred.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

Art. I.—Elixirs and Wines. A Paper read before the Louisville College of Pharmacy January 16, 1872. By C. Lewis Diehl, Louisville, Ky.

At the request of the Committee on Unofficinal Formulæ, and

other members of our College, I present in the following the formulæ used by me for preparing some of the elixirs and wines prescribed by the physicians of Louisville: Many of these have been in use by me for several years, as the elixirs of calisaya, calisaya with iron, calisaya with iron and bismuth or strychnia, gentian and iron, bromide of potassium, valerianate of ammonia, pyrophosphate of iron, quinia, strychnia, etc., and I have found these to be acceptable and good preparations. Others have only lately been prepared by me, but seem to be desirable preparations, if this class of preparations is at all desirable or necessary. It is not my intention or desire to criticise the propriety of introducing these preparations; but that a necessity exists for formulas which will secure uniformity in their preparation, seems to me beyond question. Our markets are flooded with numberless preparations of this kind, and their manufacturers are numerous. Physicians prescribe them, and usually signify the manufacturer whose particular preparation they prefer. As a result of this, we are either compelled to keep all of these preparations in stock, or to depend upon the courtesy of our fellow-pharmaceutist when they are prescribed. If we attempt to keep them in stock, a considerable outlay of capital is required, within but isolated instances more than a meagre chance for a fair return. To depend upon our neighbor for the occasional calls is unfair to him, as it in a measure compels him to carry the stock upon which we may reap profit. But in every way it is unfair to the patient, who is often caused to pay exorbitant prices (even when such price is only a fair advance upon the cost) for preparations that, if prepared by the pharmaceutist, would not exceed the cost of ordinary tinctures.

In constructing formulas for these elixirs and wines, I have attempted to simplify them as much as possible, in order that such as are but seldom demanded may be prepared as wanted. With this in view, I prepared a simple elixir, an elixir of calisaya bark, a wine flavored with orange, various solutions of essential oils in alcohol, and cochineal coloring; all of which

I usually keep in stock, and prepare by their aid such preparations as may happen to be in demand.

Elixir of Calisaya Bark.—The formula for this elixir I have already published in the "American Journal of Pharmacy," (vol. xl.), but as it has escaped the notice of many of our members, I will here repeat it, with such modifications in the technical directions as may have occurred to me during my manipulations since then.

Take of Calisaya bark, oz. xxiv.,
Curacoa orange peel (ribbons) oz. xvi.;
Coriander, oz. iv.;
Cardamon, oz. iss.;
Cinnamon (ceylon), oz. iij.;
Anise, oz. i.;
Cocoa (Baker's), oz. viij.,

Reduce to a moderately fine powder; displace with a menstruüm consisting of one part, by measure, of stronger alcohol and three parts of water; obtain two and a half gallons of percolate.

Meanwhile prepare from six pints of solution of tersulph. of iron, hydrated sesquioxide of iron by the formula of the Pharmacopœia, measure it, and add to every four measures one measure of alcohol; then add of this sufficient to the percolate, obtained as above, to deprive it of its cinchotannic acid. The absence of the latter is readily ascertained by the addition of a drop of muriated tincture of iron to a filtered portion of the liquid in operation, which should not be colored by such addition. Should coloration result, the intensity or faintness will serve as a guide to the further quantity of hydrated sesquioxide of iron necessary to completely detannate the preparation. As soon as this result is obtained, strain the mixture upon a muslin strainer, and when the liquid ceases to pass, wash the residue upon the strainer with sufficient of a mixture of one part stronger alcohol to three of water, to make the strained liquid measure five gallons.

Now triturate together

Oil of orange (fresh) f℥ss., (or solution f℥v., see further on);
Carbonate of magnesia, ℥vj.

When thoroughly mixed, incorporate it with the strained liquid obtained as above, agitate well and filter through paper. Express the filter between muslin, filter the expressed liquid and mix with the previous filtrate, in which dissolve 15 lbs. av. of sugar. If necessary filter the elixir thus obtained; but simple straining will usually answer.

Simple Elixir.—Take

Oil of orange, (fresh) f℥i. (or solution f℥x);
Oil of cinnamon, m. x. (or solution m. c.);
Oil of anise, m. iv. (or solution m. xl.);
Oil of bitter almond, m. ij. (or solution m. xx.);
Tinct. of Cardamon, f℥x.;
Stronger alcohol, oij.

Dissolve the oils in the alcohol, add the tincture and triturate the solution with a previously powdered mixture of

Cocoa (Baker's), ℥j.;
Carb. magnesia ℥ij.

Then add gradually 4½ pints of water, transfer the mixture into a 1-gallon bottle, agitate occasionally for several hours, and filter. Express the filter between muslin, filter the expressed liquid, mix with the previous filtrate and dissolve in it 3 lbs. av. sugar. Filter or strain as may be necessary.

The simple elixir thus prepared has the color of dark Madeira wine and an exceedingly pleasant taste. It serves as a vehicle for many medicines, disguising them to a great extent, and rendering them generally more palatable.

Wine of Orange.—Take of

Oil of orange, (fresh) m. v. (or solution m. l.);
Alcohol, f℥ss.;
Carb. magnes., ℥ss.

Triturate together and add:

Syrup, f oz. ij.;
Sherry wine, f oz. xiiiss.

Mix thoroughly and filter.

The wine obtained in this way has an agreeable flavor of orange. The use of carbonate of magnesia renders it neutral, and enables the introduction of medicinal compounds that are liable to decomposition in the presence of free acid.

Solutions of Essential Oils.—I have been in the habit of dissolving essential oils, that are liable to change, in alcohol, and have found these solutions very convenient for measuring minute quantities. They are prepared by dissolving

Essential oil 1 part (by measure) in
Alcohol fort. 9 parts;

Which strength is invariably meant, when in the formula, I direct the solutions of essential oils.

Cochineal Color.—Take of

Cochineal, oz. j.;
Carb. potassæ., oz. ss.;
Powd. alum, oz. ss.;
Cream of tartar, oz. j.;
Water, f oz. viij.

Reduce the cochineal to a fine powder, add the carbonate of potassæ and triturate with f oz. iij. of the water. Allow the mixture to stand one hour, add the alum and cream of tartar successively, and when effervescence has ceased, the remaining water; filter.

This solution imparts to the elixirs a fine red color; is however, in some respects, unsatisfactory as it soon spoils.

The above mentioned are all the preparations that need be kept in stock, and with them, and such other ingredients as are readily obtained by purchase, almost all the elixirs and wines now prescribed may be prepared extemporaneously. The exceptions to these are:

Compound Elixir of Taraxacum, which, being recommended and used for the purpose of disguising the extreme bitterness of quinia, should be prepared according to the original formula of Mr. Candidus, as communicated by him to the American Pharmaceutical Association, and reprinted in most Medical and Pharmaceutical Journals. The other,

Elixir of Pyrophosphate of Iron, Quinia, and Strychnia, requires particular manipulation, which precludes the use of simple elixir. The following formula—the result of concert experiments of my friend Mr. E. Scheffer and myself—has been used by me since autumn, 1869, and I can recommend it as uniformly successful when the manipulation is carefully conducted: Take of

Sulphate of quinia, 60 grains;
Strychnia, 1 grain;
Citric acid, 5 grains;
Stronger alcohol, f oz. iij.;
Syrup, oz. vj.;
Solution of oil of orange, m. 50;
Pyrophosph. iron, oz. ss.;
Distilled water, f oz. vij.;
Aqua ammonia, q. s.

Triturate the sulphate of quinia, strychnia, and citric acid together until minutely divided, then add the alcohol and solution of oil of orange. Warm the syrup slightly (to about 150° F.) and add to the turbid alcoholic mixture, when, upon stirring, the mixture becomes clear. To this add the pyrophosphate of iron, previously dissolved in the distilled water, and finally, carefully aqua ammonia (drop by drop) until the elixir is perfectly neutral to test paper; filter.

The finished preparation has a greenish yellow color, a pleasant flavor of orange, and is permanent.

Elixir of Calisaya Bark with Iron.—Take of pyrophosphate of iron 128 grains, soften in f℥ij. of water, and stir in gradually 1 pint of elixir of calisaya bark; filter.

Elixir of Calisaya Bark with Iron and Strychnia.—Dissolve 1 grain of strychnia and 1 grain of citric acid in f℥ij. of water, add 1 pint of elixir of calisaya bark with iron; mix and filter.

Elixir of Calisaya Bark with Iron and Bismuth.—Dissolve 128 grains of pyrophosphate of iron and 128 grains of ammonio-citrate of bismuth in f℥ij. of distilled water, add f℥xiv. of elixir of calisaya bark; mix and filter.

Elixir of Calisaya Bark with Iron, Bismuth, and Strychnia. Dissolve 1 grain of sulphate of strychnia in f℥ij. of water, add 1 pint of elixir of calisaya bark with iron and bismuth; mix and filter.

Elixir of Calisaya Bark with Iron and Beef.—Dissolve ℥ss. of extract of meat (prepared by Liebig's method) in 1 pint of elixir of calisaya bark with iron; allow it to stand several days (if possible) and filter.

Elixir of Pyrophosphate of Iron.—Soften 256 grains of pyrophosphate of iron in f℥ss. of water, add ℥xvss. of simple elixir; mix and filter.

Elixir of Bismuth.—Dissolve 256 grains of ammonia citrate of bismuth in f℥iv. of distilled water; mix with f℥xii. of simple elixir and filter.

Elixir of Valerianate of Ammonia.—Dissolve 256 grains of valerianate of ammonia in f℥ij. of simple elixir, carefully add aqua ammonia until the solution is exactly neutralized; then mix with f℥xiv. of simple elixir; filter and color with cochineal to a bright red.

Elixir of Valerianate of Ammonia and Quinia.—Triturate 64 grains of valerianate of quinia until minutely divided, then dissolve it in 1 pint of elixir of valerianate of ammonia, and filter.

Elixir of Valerianate of Ammonia, Quinia, and Strychnia. Dissolve 2 grains of strychnia in f℥ij of water by the aid of just sufficient valerianic acid, mix with 1 pint of elixir of valerianate of ammonia and quinia, and filter.

Elixir of Valerianate of Quinia.—Triturate 128 grains of valerianate of quinia until minutely divided, mix with 1 pint of simple elixir, carefully add valerianic acid until the liquid becomes clear, shaking after each addition, and filter.

Elixir of Valerianate of Quinia and Strychnia.—Dissolve 2 grains of strychnia (minutely divided) in f℥ij. of water by the aid of just sufficient valerianic acid, mix with 1 pint of elixir of valerianate of quinia, and filter.

Elixir of Valerianate of Strychnia.—Dissolve 3 grains of strychnia in f℥ij. of water by the aid of just sufficient valerianic acid, mix with 1 pint of simple elixir, and filter.

Elixir of Bromide of Potassium.—Dissolve ℥i. of bromide of potassium and ℥i. of sugar in 1 pint of simple elixir, add 20 m. solution of oil of orange and 10 m. solution of oil of bitter almonds, and filter. Color with cochineal color.

Elixir of Bromide of Sodium.—Prepare this like elixir of bromide of potassium, substituting bromide of sodium for bromide of potassium, and omitting the color.

Elixir of Bromide of Ammonium.—Prepare this like elixir of bromide of potassium, substituting bromide of ammonium for bromide of potassium, and omitting the color.

Elixir of Hops.—Add f℥iiss. of fluid extract of hops—made according to the formula for F. E. Gentian U. S.—to f℥xiiiss. of simple elixir, mix and filter.

Elixir of Lupulin.—Triturate f℥ij. of fluid extract of lupulin with ℥ij. of carbonate of magnesia, add f℥xiv. of simple elixir, transfer to a bottle, agitate occasionally for several hours and filter.

Elixir of Gentian and Pyrophosphate of Iron.—Triturate 100 m of solution of oil of orange with f℥ij. sugar, dissolve it in f℥viij. of elixir of pyrophosphate of iron and f℥vi. of simple elixir, add f℥ss. alcohol and f℥ss. of fluid extract of gentian, mix and filter.

**Elixir of Chloral Hydrate.*—Dissolve ℥ii. of chloral hydrate in 1 pint of simple elixir, and filter.

Wine of Iron.—Dissolve 128 grains of ammonio-citrate of iron in f℥ij. of water, add 1 pint of wine of orange, mix and filter.

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* This elixir was first prepared by me at the request of a gentleman who had habitually used the chloral hydrate since its introduction here, and he finds that the chloral, dissolved in this way, retains its virtues most completely during the period required for the consumption of one quart. For this reason I have given the formula for its preparation, thinking that if such a preparation is desirable, this seems to serve the purpose.

Bitter Wine of Iron.—Dissolve 128 grains of soluble citrate of iron and quinia in f℥ij. of water, add 1 pint of wine of orange, mix and filter.

Wine of Wild Cherry Bark.—Mix together f℥i. of fluid extract of wild cherry bark, f℥ij. syrup of wild cherry bark, 10 m. solution of oil of bitter almonds, and f℥xiii. wine of orange. Allow to stand several days, if convenient, and filter.

Wine of Wild Cherry Bark and Pyrophosphate af Iron.—Soften 128 grains of pyrophosphate of iron in f℥ij. of water, add 1 pint of wine of wild cherry bark, mix and filter.

Wine of Beef.—Dissolve ℥ss. of extract of beef—prepared by Liebig's method—in 1 pint of wine of orange, and filter.

Wine of Beef and Iron.—Dissolve ℥ss. of extract of beef—prepared by Liebig's method—in 1 pint of wine of iron, and filter.

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Bullet in the Brain.—The surgical history of the case of Talbot, developed at the recent trial, gives a special interest to an extremely remarkable case recorded by Dr. Howard, of New York, in the recent number of the "American Journal of Medical Sciences." The patient was a soldier in the Forty-fourth Indiana Infantry. The bullet entered the skull at a great distance from the point where it penetrated the scalp; it made at first a sort of trap-door fracture, and gave rise to but few symptoms. When symptoms threatening death occurred two weeks afterwards, its presence in the brain was diagnosed by a hair which was found sticking out of the aperture in the bone, and which the bullet had evidently carried with it. The skull was trephined; the ball was found deeply buried in the brain,

and was removed two weeks after the injury, The patient made a complete recovery, and subsequently enjoyed robust health, having returned to duty, and served in the cavalry.—*Exchange.*

A Model Specimen of Non-Committalism; of Vagueness in Scientific Writing; and of Pathological Valuelessness.—What influence, for good or for bad, the occurrence of pulmonary hæmorrhage in cases of consumption has on the latter, the data in my possession are not sufficient to allow me positively to determine. Judging, however, from what facts I have been enabled to collect, I should infer that the influence exercised by the hæmorrhage, one way or the other, upon the character or duration of the disease, was by no means very decided. It *may* be, that a moderate hæmorrhage occurring just preceding the development of tubercles *may* have a tendency rather to retard than promote such development. On the contrary, however, when the discharge of blood is considerable and repeated, an injurious effect *may* be anticipated. Extract from an article of Dr. Francis Condie of Philadelphia, Pa., on Hæmoptysis in Consumptive Patients, published in "American Journal Medical Sciences."—*Ex.*

Management of Inguinal Hernia.—Dr. Warren Stone, of New Orleans, La. ("Galveston Medical Journal"), advocates in recent cases of inguinal hernia, the simple operation of section, which consists simply in passing the finger up to the point of stricture, and forcibly thrusting it into it, either lacerating it or dilating it, so as to relieve the bowel. But if these means fail, it is almost as simple to cut down through the integuments and superficial fascia, and to divide the stricture outside of the hernial sac. There is no necessity for making the incision so long as is usual when the sac is opened, though it is well to make it ample. The hernial sac can be exposed without the slightest risk. Its simplicity is not its only advantage. The bowel is more easily returned when enclosed in the serous sac than when exposed to direct

manipulations. Serous membranes are easily excited by handling.—*Exchange.*

Cure of Hydrocele.—Professor E. A. Clark, of St. Louis, operates for the radical cure of hydrocele by ligating the vessels of the cord. The operation is thus described in the "Medical Archives" for December:

The operation which we have recently practiced successfully in the cure of hydrocele, consists in making an incision about two inches in length over the region of the cord, and extending for the most part into the tumor, by which the fluid of the sac is evacuated and the cord with its contents left exposed, so that in the subsequent steps of the operation, there is no possible danger of including the vas deferens in the wire ligature, which is then thrown around the cord by means of a needle armed with a wire. The needle is then detached and the two ends of the wire are passed into and through a canula, and after being tightened sufficiently to arrest the circulation of the vessels of the cord, is then fastened around the cylinder at the other end; but the loop should not be drawn so tight as to cut the vessels or nerves.

This appliance is allowed to remain from thirty-six to forty-eight hours, when the wire is snipped and removed without disturbing the wound, which should be previously closed by sutures. The advantages of this operation are:

First. The certain obliteration of the blood vessels, and the impossibility of the hydrocele returning, while the collateral circulation is quite sufficient to maintain the nutrition of the testicle, which we have never known to become atrophied after the operation.

Second. An inflammatory process is not necessary to effect a cure, and this by this method is avoided, with all its dangers.

Third. The cure is effected more speedily, only requiring the patient to be confined for five or six days, during which time he suffers no pain after the removal of the écraseur.

Fourth. There is less danger of doing any injury to the testicle than when stimulating injections are used.

Anatomy of Molluscum Fibrosum.—Dr. C. Hilton Fagge ("Medical Times and Gazette," September 24, 1870,) read a paper upon this subject, based upon the results of the dissection of portions of the integument of a woman, aged 40, affected with molluscum fibrosum, who died at Guy's Hospital of another disease. Dr. Fagge and his colleague, Mr. H. H. House, made independent examinations of the tumors, and the conclusions arrived at are as follows: 1. That each tumor is originally developed round a hair-follicle, enclosing at the same time the sebaceous glands belonging to the follicle. 2. That the smallest tumors consist of two distinct elements—a central glandular body, itself surrounding a hair, and a peripheral mass of very fine connective tissue, containing numerous minute oval nuclei. 3. That the glandular body is a sebaceous gland, enlarged by the separation of its sacculi from one another, and perhaps also by the actual multiplication and increase in size of the sacculi themselves. 4. That the peripheral mass of nucleated connective tissue is developed from the two external layers of the dermal coat of the hair-follicle and sebaceous glands. In conclusion, it is maintained that these investigations render the name "molluscum fibrosum" more appropriate than that of "fibroma molluscum" of Virchow and other German writers.

Amputations in Pennsylvania Hospital during Forty Years In 749 amputations, upon 735 patients, performed during the 40 years from 1830 to 1870, 548 were cured, and 186 died, and 1 removed. 500 were primary operations, performed during the first 24 hours after the accident, of which 117 died; 105 were secondary, of which 42 died; 114 were for diseases of a a chronic character, of which 27 died; 232 of the patients were under 20 years of age, of whom 206 were cured, and 26 died; 217 were between 20 and 30, of whom 164 were cured, and 53 died; 152 were between 30 and 40, of whom 105 were cured, and 47 died; 87 were between 40 and 50, of whom 56 were cured, and 31 died; 44 were upwards of 50, of whom 23 were cured, and 21 died.

Of 50 arm amputations, 34 were cured and 16 died.

Of 2 elbow-joint amputations, 2 were cured.

Of 47 forearm amputations, 42 were cured and 5 died.

Of 23 wrist and partial of hand amputations, 23 were cured.

Of the 321 amputations, 239 were primary; of these 176 were cured, 63 died; 22 were secondary operations, and of these 11 were cured and 11 died; 60 were amputations for chronic diseases, of these 51 were cured and 9 died.

Sixty-one amputations were done at the joints, of these 44 were cured and 17 died.

One hundred and thirty-four amputations were of the lower extremities, of these 111 were cured and 23 died.

One hundred and eighty-seven were amputations of the lower extremities, of these 124 were cured and 63 died.

One hundred and fourteen patients were under 20 years of age, of these 98 were cured and 16 died.

Eighty-four patients were between 20 and 30, of these 63 were cured and 21 died.

Sixty-five patients were between 30 and 40, of these 45 were cured and 20 died.

Twenty-five patients were between 40 and 50, of these 16 were cured and 9 died.

Twenty-three patients were above 50 years of age, of these 7 were cured and 16 died.

Dr. Thomas George Morton, one of the attending surgeons ("American Medical Sciences"), reports that ether has been almost invariably used as the anæsthetic, and no death has, he believes, ever occurred in the hospital from its use; occasionally ether has been combined with chloroform; one sudden death, however, occurred with the use of this mixture, during the removal of a fragment of necrosed bone following a leg amputation; the nitrous oxide gas he has used in very many minor operations, and in 8 amputations of limbs, and has found it satisfactory when the operation was not prolonged.

Acute Synovitis—Incision into the Joint.—Mr. J. R. Jessop, F. R. C. S., in a letter published by the "British Medical Journal," states that he lately successfully followed Prof. Lister's

plan, and incised into the knee-joint of a patient aged twenty years, who suffered from acute synovitis, after the ordinary treatment adopted in such cases had been tried, *i. e.*, rest, leeches, ice, evaporating lotions, salines, etc., etc. Mr. Jessop made an opening into the joint, and in the axis of the thigh, commencing one inch above the patella, the opening was an inch long, but had to be enlarged to one and a half inches to allow flakes of lymph to pass through, which were suspended in from eight to ten ounces of clear fluid. From the time the incision was made the excruciating pain ceased, the fever disappeared, the swelling never returned, and the patient was sent from the Leeds Infirmary to a convalescent hospital with a movable painless joint within a month from the time of the operation.—*Exchange.*

Houston, Texas, as a Residence for Consumptives.—Dr. Jas. Cowling, of Houston, Texas, ("New Orleans Med. Journal"), recommends this town as an excellent residence for those suffering from pulmonary complaints, from these facts: 1st. The temperature of the place is very mild; for in the winter months of December, January, and February, the temperature is about 46° F. This includes the 24 hours round, giving to many days sufficient heat to be without fire. 2d. The breezes prevail from the south, coming from the Gulf, then blowing across the prairie, tempering them and making them very agreeable, pleasant, and healthy. 3d. Every facility exists for out-door exercise, either about town or in the sheltered woods around, or open prairie, and by railway or steamboat. 4th. There are well-supplied markets, good hotels, and very agreeable society, with its advantages, although not so prominent as some already mentioned, nevertheless possessing in conjunction a beneficial influence on the patient.

Dr. Cowling, in conclusion, affirms that patients following out the above suggestions, aided by proper medical advice, may rely, in most cases, upon a great if not permanent relief.

Cases of Ectopia Cordis.—Dr. Henry Tuck, Boston, Mass., ("Boston Med. and Sur. Journal"), in his translation of the

proceedings of the Berlin Medical Society, alludes to a rare case of uncomplicated ectopia cordis in an infant—reported by Dr. Neumann Schlessinger—which lived only a few minutes after delivery. The heart lay entirely free upon the centre of the sternum, horizontally across the body, its base toward the left, and its somewhat rounded apex toward the right. It had no pericardium. The post-mortem, made by Professor Virchow, showed a patent foramen ovale and a defect in the septum ventriculorum.

In closing, he remarks that the interior displacement of the heart entirely outside of the walls of the thorax, without any complication or other deformity, is very rare. There have been found only six cases of this sort on record. The first, observed by Martinez, in Madrid, in 1706; the second, by Büttner, in Königsberg, in 1745, the other four by Sandifort, Haan, Albers, Monod, and Cruveilhier.

MEDICAL NEWS.

'Nulla dies sine linea."

In the last number of this work, the danger surrounding some of the very few medical journals at the South was mentioned, and anticipated trouble was distinctly foreshadowed. The warning note was not given too soon. One of the journals indicated has given gloomy evidences of disaster and distress. Its editors have recently applied to the medical Institution with which they are connected for help; their appeal for charity shows, in the amount solicited, great want and suffering; it manifests very serious poverty and destitution. A journal must be in a terrible strait, when, claiming to be independent, its editors beg their colleagues in the same medical school for $1,000; not as a loan, but, as Othello said, "for the cause." Lamentable to relate, the request was refused, and the end is

not yet; but is near at hand. As the Poet Campbell well remarked, in his Pleasures of Hope, "coming events cast their shadows before"; or, to quote more appropriately from the prophetic Ezekiel," the fathers have eaten sour grapes, and the teeth of the children are set on edge." In the familiar expression, "the sere and yellow leaf," the relation or connection of the adjectives is suggestive. The name of the journal will not be mentioned. It is sacrilege to distress the sick, and silence is not only decorous, but imperative during the latter moments of the dying. One can only gaze in silence at the painful manifestations of dissolution, and, when all is over, aid in the sad arrangements for the anticipated funeral.———The Board of Commissioners of the large Hospital in this city have instituted many excellent improvements, and reformed much that needed reformation. Nothing done shows more clearly their spirit of fairness, than the fact that the resident staff are now selected with strict reference to the merits of each member, as demonstrated during a strict, protracted, and public examination before the attending staff of the Institution. In the severe examination just completed, the four candidates who were successful are as follows: T. W. Gardiner, Charles Becker C. B. Doll, and —— West. Drs. Gardiner, Becker, and Doll, are graduates of the Louisville Medical College. Dr. West, is a graduate of the Medical Department of the University of Louisville. There were seven candidates.———The publication of the "National Medical Journal," Washington, D. C., has been suspended.———The January number of the "American Journal of Obstetrics and Diseases of Women and Children," has not yet appeared. The publishers, Messrs. W. H. Baldwin & Co., of New York, write to say that it will soon be issued.———*Appointments, Honors, etc.*—Dr. William A. Hammond has been elected an honorary member of the St. Andrews Medical Graduates' Association. Dr. S. Weir Mitchell, of Philadelphia, is the only other American member of the Association, which embraces some of the most eminent medical gentlemen of Great Britain. There are two candidates for the

vacant chair of Physiology in the Paris Faculty of Medicine—M. Béclard, author of the well-known treatise on physiology, and M. Vulpian, present Professor of Pathological Anatomy. Dr. John Rose Cormack has received the honor of knighthood from Queen Victoria, in acknowledgment of his services to English subjects during the two sieges of Paris. He had previously received the decoration of the Legion of Honor from the French Government. Dr. Priestly has resigned his office of Professor of Obstetrics in King's College, and of physician for the Diseases of Women and Children to King's College Hospital, both of which positions he has filled with distinction for nearly ten years. He assigns, as a reason, that he cannot spare the necessary time from his private practice. Dr. Paget has been appointed to the Regius Professorship of Physic in the University of Cambridge. Mr. Darwin's name has been placed first on the list for the forthcoming election, at the French Academy of Sciences, of a corresponding member in Zoölogy. Prof. Bennet, of Edinburgh, has been obliged to abandon his labors on account of ill-health, and will pass the remainder of the winter at Mentone, under the care of his namesake, J. H. Bennet, of London. Sir William Jenner is to receive the title of Knight Commander of the Bath, and Dr. Gull a baronetcy, for services rendered to the Prince of Wales in his recent illness. M. Barth, who, since Trousseau's death, has had a large share of the consulting practice of Paris, is President of the Academy of Medicine of Paris for 1872. At the meeting of January 2d, he announced the death of Dr. Jaeger, of Vienna. At the Academy of Sciences, M. Fay takes the presidential chair for the current year.—*Ex.*———*Aid for Chicago.*—Dr. Gustav Simon, Professor of Surgery in Heidelberg, and Dr. O. Becker, Professor of Ophthalmology, have issued an address to the Medical Profession in Germany, soliciting aid in behalf of the medical practitioners of Chicago who have suffered by the recent fire in that city.———*A Very Old Man.*—Harvey Thacker, who died recently in California, was one hundred and twenty-eight years old at the date of death. He was the son-in-law of

the famous Daniel Boone, the first settler in Kentucky.—*Ex.*——*Gift to the Kentucky Public Library.*—Dr. Christopher Graham, one of the oldest and most esteemed citizens of Kentucky, has presented to the public library of this State his collection of minerals, fossils, and geological specimens, valued at $30,000, the work of fifty years.—*Ex.*———*The Largest Consulting Practice in the World.*—Dr. Gull, of Guy's Hospital, London, is said to have the largest consulting practice of any physician in the world—worth not less than £25,000 a year ($125,000). *Ex.*——— *Medical Colleges and Graduates in the United States.*—Dr. Toner's statistics for the Department of the Interior show the number of medical colleges in the United States to be: Regular, 60; Pharmacy, 16; Dental, 8; Homœopathic, 8; Eclectic, 8; Botanic, 2. Forty-eight of the colleges have furnished statistics for 1870, which show 4,989 matriculates, 1,500 graduates, 77 ad Eundem, and 15 honorary degrees.—*Ex.*———The Sanitary Department of the municipality of Vienna has determined to purchase 100,000 hundred weight of sulphate of iron for disinfecting the latrines and sewers; and to have a short and concise treatise on the necessity of disinfection printed and circulated among all the householders.—*Ex.* ———M. Liebreich has been to Paris to see M. Thiers's eyes. According to a telegram, M. Liebreich states there is no cause for uneasiness. We hope that our skillful confrère will enable the President to see his way to the settlement of the French political difficulties—*Ex.*———Cholera has reäppeared in Western Mekron, and intermittent fever is prevalent in the town of Gwadur. Several villages in the immediate neighborhood of Calcutta are suffering from severe visitation of fever. A few cases of cholera are reported to have occurred at Decca.—*Ex.* The British Board of Trade has decided to substitute chloralum for the solution of zinc at present included in the scale of medicines and medical stores issued and caused to be published by the Board.—*Ex.*———A Swiss Society has offered two prizes of 400 francs and 200 francs each, for an essay on the best means for moderating the excessive consumption of ardent

spirits in Switzerland.—*Ex.*———Dr. Tilbury Fox has been nominated by the President a member of the Leprosy Committee of the Royal College of Physicians.—*Ex.*———Dr. Walter Kidder, the inventor of the electrical crank battery, commonly known as "Kidder's Electrical Machine," died on January 29, 1872, of apoplexy, after a painful illness of one week. He was a native of Lowell, Mass.———*The Photometer.*—A newly-invented photometer proves that light penetrates 100 fathoms below the surface of the sea—70 fathoms more than hitherto supposed.———Dr. Friedrich Jaeger, the elder of the two distinguished ophthalmologists of that name (father and son) died in Vienna on December 26th, at the age of eighty-eight. He was the son of a physician to Duke Charles Eugene, of Würtemburg. At the age of twenty-nine he went to Vienna, and became the assistant of Beer, whose daughter he afterwards married. In 1812 he graduated at the University of Vienna. His skill in ophthalmic surgery soon became known. In 1825 he was commissioned to report on an epidemic of Egyptian ophthalmia which had broken out among the troops; and in the following year an ophthalmological institution was established, which he managed until 1848 with the title of Professor of Ophthalmology. His reputation extended beyond Austria; he was called to Hanover to operate for traumatic cataract on the Crown Prince (now the ex-King). The operation he saw at once would be useless; but in spite of his strenuous remonstrance he was obliged to perform it, the result fulfilling his expectation of failure. He was the author (in 1840) of a treatise on "Egyptian Ophthalmia"; and ophthalmic surgery is indebted to him for several improvements in operative procedures and instruments. His son, Edward Jaeger, is the contriver of the well-known "test-types," and is the author of some valuable works in ophthalmic surgery.—*Med. World.*———A new quarterly has made its appearance in England, called "The German Quarterly Magazine—A Series of Popular Essays on Science, History, and Art." The first number contains three papers: "The Cranial Affinities of Man and the Ape," by Ru-

dolph Virchow; "Sight and the Visual Organs," by A. Von Græfe; and "The Circulation of the Waters on the Surface of the Earth," by H. W. Dove.—*Ex.*———Sir Roderic I. Murchison, Bart., has bequeathed £1,000 to Dr. A Bence Jones, his physician.—*Ex.*———*Professor Virchow.*—This renowned German pathologist, it is said, intends to leave Berlin and go to London. He has always been a Democrat in politics, and has in consequence suffered a great deal of persecution on the part of the royal authorities.—*Ex.*——— *Honors to Virchow.*—The Autumn season on the Continent, as in England, is marked by the occurrence of various scientific gatherings. At several of these Professor Virchow has been receiving invitations, which the Berlin newspapers have chronicled from time to time. At the Assembly of German Naturalists and Physicians, held at Rostock, his speech was the great event of the meeting. During the Bologna Conference of Archæologists, he was entertained at a banquet by the Italian dignitaries and men of science; at a scientific assembly held in Rome, the audience rose to their feet to welcome the celebrated Berlin professor, who made them a speech in French.—*Ex.*——*Marriage v. Celibacy.*—M. Bertillon read a paper at the sitting of the Academy of Medicine of Paris, on the 14th of November, entitled "Influence du marriage sur la durée de la vie et sur les maladies intellectuelles ou morales," maintaining the healthful influence of conjugal association as compared with that of celibacy, and using as evidence the statistics of France, Holland, and Belgium. According to his figures, between the ages of twenty-five and thirty years 1,000 married men furnish 6 deaths; 1,000 bachelors, 10 deaths; and 1,000 widowers, 22 deaths. From thirty to thirty-five years of age, the same classes, respectively, furnish 7, 11, and 17½ deaths. From thirty-five to forty years, the mortality is 7½, 13, and 17½ per 1,000 respectively. And so on in a series of tables for all ages, the married man has always the advantage of the single man; but what is the explanation of the fact that among widowers the mortality is even greater than among bachelors? In the case of men married under the age of

twenty, the statistics show anything but a salutary result. Out of 8,000 of this class, the mortality was, before marriage, only 7 per 1,000; *after marriage it was* 60. This is a constant result in Paris, Belgium, and Holland. Everywhere young married people, from eighteen to twenty years of age, die as fast as old people of from sixty to seventy years of age. The conclusion seems evident, according to Hufeland, "that the premature use of the genital organs is the most sure means of inoculating old age." This astonishing mortality being due to no special malady, but to a general enervation, which, without doubt, renders them a prey to any disease. The same advantage of the marriage state obtains in the case of females, though up to the age of thirty the difference is not so apparent as in the other sex. From thirty to thirty-five, the mortality is 11 per 1,000 for single women, and only 9 per 1,000 for married women, and this difference increases up to the age of fifty-five. Thus, from fifty to fifty-five years of age 1,000 wives furnish only 15 or 16 deaths, whilst as many single women or widows furnish 26 or 27. This advantage remains very notable beyond that age, diminishing but little. In France, however, under twenty-five, and in Paris, under twenty years of age, marriage is far from favorable, and even injurious as in the case of males. The mortality of unmarried girls of from fifteen to twenty is 7.53 per 1,000; the mortality of wives of the same age being 11.86. The mortality of girls from twenty to twenty-five is 8.32; of wives of the same age, 9.92; the difference in this class being due, no doubt, to pregnancy and its accidents. The deadly effects of widowerhood in men is equally shown in the case of widows up to the age of thirty, and after forty-five more single women than widows die. The influence of marriage on criminality is not less striking. Whilst the criminality of single men for crimes against the person is 100, in married men it is only 49, and 45 for offences against property. The criminality of widows and widowers approaches that of celibacy. Relative to suicide, the author concludes that this cause of death is reduced one-half by marriage.—*Ex.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

BREVITIES.

The Kentucky State Medical Society meets in this city on the first Tuesday in April. A full meeting is anticipated, and a warm and generous welcome will be extended.———The American Medical Association meets at Philadelphia May 7th, 1872.———The Mississippi State Medical Society meets at Holly Springs April 3, 1872.———The Tennessee State Medical Society meets at Nashville April 4, 1872.———The South Carolina State Medical Society meets at Columbia on the third Tuesday in April, 1872.———The Alabama State Medical Society met at Huntsville March 26, 1872.———The question as to the native State and age of Dr. Daniel Drake seems to be disputed by many in New York. He was born at Plainfield, Essex county, N. J., October 20, 1785. His family moved to Mayslick, Ky., when young Drake was only thirty months old.———The "Yazoo Weekly Banner" announces the successful operation of tracheotomy performed by Dr. J. D. Burch, formerly of this city. The patient was a lad of fourteen years of age, who had, by inspiration, received "a small cockle-bur" into the trachea. The operation was performed under the influence of chloroform. This is the second successful operation of tracheotomy performed by Dr. Burch. He deserves success in his new field, and it will give his numerous friends pleasure to hear always of his prosperity.———A few years since an efficient and economical microscope, known as the Craig microscope, was well made and largely sold in the United States. It has passed into other hands, and is now comparatively worthless. No one can rely upon the honesty of a manufacturer who advertises this instrument as having a magnifying power of 10,000 diameters, when its former maker never succeeded in obtaining a power over 100 diameters. The advertisements of

this microscope manifest not only dishonesty, but the grossest ignorance on the part of the manufacturers.———There were sixty-five applicants for graduation at the Louisville Medical College at the close of the last session. During the second session (1870–71) of this College, the size of the class was double that of the previous year; during the last session (1871–72) the size of the class was again double that of the previous year. The register for the past year shows over 200 matriculants. ———Many of the canvassers of this Journal are so active in its behalf and so generous in its support that they are giving their commission ($1) to new subscribers as an inducement in securing their influence and assistance. This is done by old subscribers. What is still more remarkable, the cost of subscription has actually been paid by the old subscriber to secure a new subscription; the old subscriber advancing the money, in order that the Journal might obtain increased influence and support. These warm-hearted and generous friends have the sincerest thanks of the editor. Their names ought to be known, but this information will not be given without their consent. No one will, after reading these facts, be surprised to learn that the subscription list has recently had an accession of over 200 names, and that the January, February, and almost all of the March numbers have been exhausted.———Dr. Charles Saffray is no longer connected with the Louisville Medical College. Professor James Holloway will occupy the chairs of Clinical Surgery and Physiology. He can not only fill these chairs (as John Randolph said of his colleague) but he will most ably represent them.———The "Western Lancet" is the title of a new journal published at San Francisco. It is well arranged, but seems to be too largely devoted to matters of only local interest.———The editors of the "Georgia Medical "Companion" are prating, in every issue, *usque ad nauseam*, of ethics, while, at the same time, they declare that the "Companion" is "the cheapest and best" journal published. Apart from an easy demonstration that it is neither the cheapest nor best, it is remarkable that they should adopt the maudlin

habit of writing always of propriety, of their fixed intention to "exhalt" the Profession, and yet be guilty of so gross a breach of decorum and good taste as to be claiming that a little magazine not out of its swaddling clothes is the best, etc., etc.; and to be persistently publishing such commendatory letters as are found in large numbers in every journal office. Surely no one having any regard for proper taste, decorum, ethics or propriety, could be induced even to speak publicly of such letters; far less publish them. Self-laudation, boasting, and the use of the very means made disreputable by every nostrum vender in the land, come strangely from those whose sole text seems to be ethics and propriety. Dr. Gross has said that even American birds are remarkable for precocity. Birds elsewhere quietly rest until the period of incubation is fully terminated, but American birds run around for admiration before the egg-shell has yet dropped from their heads. Many American medical editors might be classed in this category. The "Companion" is about one year old!! It might be termed a medical yearling. It has reached the vigorous size of sixty-four pages, and has already sixty-eight editors, or one editor and four-sixty-fourths of an editor to each page. The whole editors apparently tyrannize over the fractional; for they seem never to work. This is unfair. The whole Medical Press protests against such an imposition. Whatever fraction of an editor recently styled the "Companion" the cheapest and best journal should be caught and put in his cradle. It is time for some whole editor to take charge. All of the fractions evidently need rest.——The "Galveston Journal" is the only Hibernator in the journalistic classification. It retires every Autumn, and no one sees it again until Spring, when, like all hibernators, it comes out cautiously, lean and emaciated. Those who saw it last Autumn (and some did see it once or twice) are uneasy in regard to it. Any one seeing it this Spring will remove very general apprehensions by reporting the fact.

"A Special Offer for 1872" has been made to many can-

vassers for this Journal through many of the subscribers. Whoever holds such an "offer" is a *canvasser* for the Journal, and not an *agent*. No one outside of the Journal office is authorized to give receipts for subscription or advertisement bills paid. Those who are already subscribers to the Journal should therefore make payment to the editor and proprietor only. No one holding a "Special Offer for 1872" has the right to receive money from those who are already subscribers to the Journal; and all receipts given for money so received are valueless. "The Special Offer" is only made for the purpose of obtaining *new* subscribers. A liberal commission is paid for this purpose. No commission whatever will be allowed on any sums obtained from old subscribers; and old subscribers (those who have been subscribers for a year or more) are particularly notified to make payment only to the editor; receipts given to them by any one else are unauthorized and valueless. This rule is not intended to censure or discredit in any manner those who are obtaining subscriptions and advertisements; for all so engaged are, in every respect, honest and worthy; they are all reliable; but it is done to avoid those endless errors which must occur in the Journal account-books, when accounts and receipts are issued from more than a single office. Money should be sent by check, bill-of-exchange, post-office money-order, "express," or in a registered letter. All sums thus sent are at the risk of the Journal. Money enclosed in an unregistered letter is, of course, sent at the risk of the subscriber. Letters should be addressed to Dr. E. S. Gaillard, Louisville, Ky. It is unnecessary to give the local address, as this is well known at the post office.———*Notice.*—Any physician (with a little capital) seeking a desirable location in Kentucky, will please address the editor.

THE RICHMOND AND LOUISVILLE

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ORIGINAL COMMUNICATIONS.

"Qui docet discit."

ART. I.—EARLY BLISTERING IN PNEUMONIA AND PLEURISY. By S. S. HERRICK, M. D., Professor of Chemistry, New Orleans School of Medicine.

I am unable to recollect precisely when or on what grounds I first employed the treatment above indicated, but notes preserved on cases occurring since the war show that it has been practiced in all available ones for more than six years. Without claiming originality for this plan, I observe that recent examination of standard writers on the subject and inquiring among my acquaintance have found no authority in its favor, and express disapproval whenever alluded to. By some authorities blistering is recommended, *after* consolidation or effusion, as the case may be, has taken place; but the crepitant "râle" of pneumonia and friction sounds of pleurisy are supposed to afford a contra-indication to active counter-irritation. The reason alleged is the tendency of this treatment to aggravate already existing inflammation.

Here now is the proper point to consider the validity of the above allegation, which I propose to do, first theoretically and then practically. Counter-irritation is commonly supposed to be effective chiefly as a revulsive or derivative—terms not exactly synonymous, but not necessary here to be defined. It may also be made depletive to a certain, though slight, extent. Another important action is mentioned by Dr. C. J. B. Williams, in his "Principles of Medicine," as probably exercised by counter-irritants applied near an inflamed part—that of promoting absorption of effused products through osmosis, by increasing the flow of blood on the stimulated surface and in the adjacent tissues. To this last operation I attribute chiefly the beneficial effects found by me in early blistering for pneumonia and pleurisy.

Following the ordinary division of these maladies into separate stages, I would observe that distinctions are made, in both, between the first and second stages, in respect to pathology and therapeutics, which I have not found warranted by clinical experience, and am disposed to regard as unsound in theory. The first is that of acute inflammation—distinguished in pneumonia by the crepitant "râle," and in pleurisy by the to-and-fro friction sounds; the second, that of effusion—in pneumonia characterized by consolidation of the pulmonary substance, and in pleurisy by serous accumulation in the pleural sac. In the first stage, authorities concur in condemning blisters, while many commend them in the second, as promoting absorption of effused products.

Let us consider now whether the secondary stage, in either case, is anything else but the direct progress of what is already commenced in the primary. What is the crepitant "râle," but the sound produced by the forcible separation of mucus lining walls partially agglutinated by an albuminous effusion? When these minute ramifications are occluded and filled, all recognize the second stage. In pleurisy another acoustic effect is produced by a similar tenacious effusion on two extensive surfaces oscillating on each other. As to the liquid accumulation in

the serous sac, who can say that it has not been going on throughout the first stage? When this liquid distends the sac sufficiently, the friction sounds cease, either from suspension of the respiratory movement or by solution of the less consistent portion of the effusion.

In miasmatic diseases the febrile stage is now generally regarded as a conservative effort of nature to remove the congestions of the cold stage. We may say that the current is hurried, in order to increase its power and force a passage through local capillary engorgements. In this manner their return to the circulation wholly or measurably takes place. In the pulmonary apparatus, by the action of changes in temperature, mechanical, or chemical irritants, or traumatic violence, local capillary stasis leads to effusion of the liquor sanguinis. In the minute bronchial ramifications, its watery portion is exhaled in the breath, while the more consistent and tenacious portion produces the crepitant "râle." In pleurisy, the thinner portion may return to the vascular system, until the capillary engorgement so increases as to produce the extensive extravasation of well-recognized effusion. To complete the parallel with the miasmatic diseases, the onset of these thoracic disturbances is indicated by a more or less marked cold stage, followed by a febrile reäction. The former would seem to be an alarm given by the nervous system of injury received; and agreeably to the above accepted reasoning, the latter may be regarded as a conservative struggle to overcome capillary stasis and restore effused matters to the circulation. To me, at least, this seems reasonable; and, if so, it is easy to understand why local hyperæmia from a blister should promote absorption, more efficiently at the very beginning of an exudation, than at any subsequent stage.

Nor are we without precedent in the treatment of acute inflammation in the early stage by blistering. To Déchilly, in 1850, is attributed the introduction of this plan in acute rheumatism, and it has numerous advocates. That marked success should not attend it, rather than other remedies, in the pres-

ence of persistent causes, is not strange. The early treatment of buboes by iodine paint, and sometimes by blisters, is old practice; and quite lately it is asserted that felons may be aborted by blisters at the very onset of the inflammation.

So much now for *theory*, which, in pathology, serves mainly to suggest therapeutic agents, that shall stand or fall before the test of experience; or serves, as in the present case, to account for facts already established—in my own mind. The facts are exhibited in the following table of cases of pneumonia and pleuro-pneumonia, from which none has been excluded by reason of fatal or unfavorable result: It may here be stated that the rust-colored sputa of pneumonia have not appeared as a symptom in these cases, and that only two, while under treatment, passed into the stage of consolidation, which will hereafter be particularly noticed.

NOTE.—Just at the present time (March 18th) I am furnished with a contrast, in the case of a gentleman who was treated for pleuro-pneumonia in a neighboring city. After an abundant bloody expectoration, he was blistered thoroughly. Whatever further treatment, is unknown and immaterial. Now I find the lower front and lateral portions of the right lung nearly impervious to air, with marked dullness on percussion. Besides, his cardiac functions have been so deranged as to forbid the recumbent posture for several weeks, and his lower extremities are dropsical.

Table of Cases of Pneumonia and Pleuro-Pneumonia.

Number.	Age.	LOCATION.	Days under treatment.	Recovered or died.	REMARKS.
1	3 y'rs	Double posterior.	8	R.	Followed measles and intermittent fever. Left lung attacked two days after right.
2	10 y'rs	Right lateral.	3	R.	Started for Galveston on the fourth day.
3	4 y'rs	Right posterior.	5	R.	Complicated with feb. int. Found in second stage after being ill one week.
4	20 y'rs	Left posterior and lateral.	7	R.	Found in 2d stage; blistered immediately. Returning crepitation observed next day.
5	2 y'rs	Left posterior.	2	R.	Followed measles. No medication but blistering.
6	15 mos	Left posterior.	10	D.	Complicated with feb. int.
7	3 y'rs	Right posterior.	3	R.	Sick one week without medical attention. Crepitation perhaps that of spontaneous resolution.
8	14 y'rs	Left, nearly whole.	14	R.	Traumatic. Not blistered until second stage, on account of severe broken ribs.
9	14 mos	Right posterior.	3	R.	
10	2 mos	" "	2	R.	
11	2 y'rs	Double posterior and lateral.	4	R.	Left lung attacked a few hours after right. Blisters applied successively to four spots.
12	35 y'rs	Right posterior.	2	R.	
13	25 y'rs	Left posterior.	8	R.	Complicated with feb. int.
14	3 y'rs	" "	2	R.	
15	25 y'rs	Pleuro-pneumonia, right lat	13	R.	From a fall of 15 feet while drunk. Complicated with feb. int. Resolution prompt.
16	8 mos	Left posterior.	5	R.	Followed spasmodic croup. Resolution prompt.
17	5 y'rs	" "	2	R.	Blistered before occurrence of crepitation. Pain and dyspnœa disappeared in 12 h's.
18	14 mos	R. post. & lateral, L. post.	5	R.	Left lung attacked two days after right. Rapid convalescence.
19	30 y'rs	Pleuro-pneumonia, right lat.	6	R.	Pain and dyspnœa cease as vesication commences. Complicated with feb. int.
20	13 mos	Left posterior and lateral.	6	R.	Previously anæmic and delicate.
21	37 y'rs	Right posterior and lateral.	4	R.	Same as case 12. Urine nearly suppressed on second day.
22	12 mos	Left posterior.	1½	D.	Sick 4 days without treatment. See case 7. Sub-crepitant râle succeeded blister.
23	15 mos	Right posterior.	4	R.	First plaster failed to vesicate. Prompt relief followed a second 15 hours after.
24	61 y'rs	Left	1½	D.	Had long been in feeble health, preceded by erysipelas on face. Resolution commenced after blistering.

In case 3 the right lung was found consolidated. A blister was at once ordered, but the order was disregarded. The next day it was applied, and on the following day returning crepitation was observed. Thenceforward convalescence was rapid.

Case 6, in the rear of town, had been ill two days without treatment. Crepitant "râle" observed and blister ordered on first visit. Sub-crepitant "râle" observed the next day, and by the fourth day of treatment child considered convalescent. Returning two days after, I found the same lung consolidated from a fresh attack, and a periodic fever. Another blister was directed at once, and quinine after the fever abated. In four days more resolution again commenced, the fever having been controlled in the meantime. Death from asthenia.

In case 8, strips of adhesive plaster had been applied over the whole left side of the chest, to prevent expansion and favor union of the broken ribs. I have since doubted the propriety of making the pneumonia secondary to the fracture. Convalescence was much prolonged, after a very severe attack of pneumonia.

Case 11, being my own child, was closely observed. Blisters were at once applied wherever crepitation was detected, and resolution promptly followed. As both lungs were extensively involved at the same time, excessive dyspnœa and restlessness made the case a very serious one for about thirty-six hours. Convalescence rapid and recovery complete.

Case 17 presented the rational symptoms of pneumonia—hurried respiration, restlessness, fever, and pain in left side of chest. Auscultation revealed only diminished respiratory murmur posteriorly on this side, denoting engorgement and narrowing of the air passages. Blistering at night was followed by abatement of all these symptoms before the morning visit.

Case 22 was a mulatto child. It is a matter of general observation that individuals of mixed races have less vital stamina than either of the parents. Resolution having been observed within fifteen hours of first visit, the child was found moribund sixteen hours after. Death probably from asthenia.

Case 24, in order of time, should follow 6. Blistering was resorted to on the detection of fine crepitation, about 3 P. M. This was followed by relief of pain and dyspnœa, and the most comfortable night since the beginning of his illness. In the morning the ratio between respiration and pulse was nearly normal. Death from asthenia.

Agreeably to the views already indicated, the blister is always put directly over the seat of inflammation, of a size proportioned to the region involved. In pneumonia this is generally the posterior aspect, sometimes extending to the lateral. The location is to be defined, of course, by auscultation. It is to be remarked that I do not find severe vesication necessary. The healing of the blister is never retarded, and often promoted by dressing with ointment of zinc oxide. I generally direct the plaster to be removed from the skin of an adult as soon as it is well reddened. A warm poultice completes vesication in two or three hours. This plan is always pursued with children, and sometimes the plaster remains on no longer than half an hour. The efficacy of blistering ointment varies greatly, as well as the delicacy of skin in different subjects, and effects must be closely watched.

As to internal medication, I seldom find anything needed beyond an anodyne expectorant. In some cases the cough disappears after vesication, and in all cases the pain and dyspnœa. I confidently expect to find the sub-crepitant "râle," in place of the crepitant, within twelve hours after blistering.

In the stage of consolidation I find the effects of blistering less prompt and marked, but yet regard it as the most powerful agent known to favor resolution.

With regard to pleurisy there is little to say, as I seldom find it uncomplicated with pneumonia. I am satisfied, however, that counter-irritation is the surest and quickest remedy. The relief of pain and dyspnœa is synchronous with vesication, and I am inclined to think that an action short of this is sufficient in cases of moderate severity in the earliest stage. Such were two instances of young children seen only once by me during

the past winter. There was no room to mistake the friction sounds, the fever, and general distress. As I did not expect to see either again, turpentine stupes were ordered, and subsequent inquiries have satisfied me of their speedy recovery.

It is objected that early blistering interferes with physical examination of the chest, but it is needless to make it severe enough to prevent auscultation without inconvenience. Still, even if this were prevented, the rational symptoms of amendment might be satisfactory to a reasonable mind, consulting the interest of the patient rather than the gratification of an idle curiosity.

It will be noticed that a large proportion of the above cases were young children, which shows that, in my experience, infancy gives no immunity from pneumonia, as some authorities claim. If the crepitant "râle" be of any value as a sign of pneumonia, its claim must be allowed with all these infants; and I suspect that auscultation would sometimes reveal it to other observers, if they would practice it more on young subjects. With young children I have found pneumonia more prone than with adults to extend to the other lung, after its first onset, and not less apt to involve extensive tracts—authority to the contrary notwithstanding.

Another remark is the frequency of complications with intermittent fever in miasmatic regions. Prompt anti-periodic medication is here demanded, but not to the neglect of counter-irritation.

In conclusion, let me disclaim any purpose of revolutionizing the treatment of pneumonia and pleurisy. For my theorizing no indulgence is asked, since it is every one's right to advance his own theories and upset as many others as he can. As to the facts, let them be explained as they can, or must be. Be it said, that every one is the best rider of his own hobby, with the obvious personal application. One favor only is asked: if any medical brother should have the hardihood to give this practice a fair trial, he is respectfully asked to apprise me of the result.

ART. II.—ELECTROPHYSIOLOGY.

By A. U. EVARTS, M. D., Waterloo, Iowa.

The nervous system, its mode of structure, transmitting power, ramifications, its physiological, and pathological phenomena are comprehended fully when we conceive and thoroughly understand its existence as in conjunction and inseparable alliance with our present electrical telegraphic system.

The aphorism is true, that nothing ever existed in physiology, that had not its pathological type, a beautiful and instructive remark, giving birth to a twin apothegm, *i. e.*, everything in Nature has its typical counterpart in Art. In the economy of the nervous system, our oceanic cable and land lines are a Pollux to its Castor. Witness the twinship, the exact analogy, and observe how similar the construction, how beautiful the comparison.

The telegraph and nervous systems are precisely alike in mode of structure, and the principle to be obtained in both is the same—viz., the transmitting medium of an imponderable substance. They are analogically identical in their anatomical structure, however minute; one being the transmitting medium of an individual, under control of its possessor alone, the other subservient to the call and beck of a nation; one the pulse-beat of a single person, the other, a pulse-beat of myriads of such beings. As a nerve consists of a bundle of ultimate filaments associated together, so does the cable consist of a bundle of small wires alike associated; these filaments are bound together by an investing membrane, so, also are the wires bound together by an analogous substance; as the filaments run laterally, so run the wires; as the "white substance," surrounding the "axis cylinder" serves as the insulating material of the nerve, so the gutta percha, etc., is the insulation of the cable, all being bound by another investing membrane like that of the nerve; in the "axis cylinder" of the nerve we see the core of the cable. The spinal cord, like our main lines, unites distant points, receiving special and interme-

diate communications, and conveying them to and from main centres.

Where in all nature do we find so grand and veritable imitation, such exquisite blending; we might add, such a noble wedding of Nature and Art, as is displayed to our astonished minds in the minute anatomical structure, and analogical arrangement of these systems. It is a source of wonder to us when we consider the ramifications of the nervous system, and observe how perfectly each of its innumerable branches receives its proper supply. Here again we meet with an analogy in art. The brain, the main generator of nerve force, has its type in the main battery of the wires.

With a battery of a certain standard, we work fifty or sixty lines about as easily as we do one. We see that the brain supplies nerve-power to the numerous ramifications as readily as though there were no such, seemingly, interminable turnings and twinings. The telegraphic "switch-board," a contrivance for concentration of all wires entering a chief point, received upon it, so as to allow of their being changed in every conceivable manner, represents a "plexus." Nor does the analogy end here. It is interesting to know, that in the construction of our primordial telegraph system, the human mind unconsciously imitated Nature in her construction of the Great "Sympathetic." Our first lir was what is termed the "round circuit"; the sympathetic, with its continuity obtaining by virtue of the ganglion of "Ribes," and that of the "Impar," and in throwing out in all directions to the vegetative organs branches answering to way office connections, finds its analogue in the "round circuit," connecting two great cities. Where else are the most refined principles of physics, and the most profound and sublime essays of Nature so happily combined. Nervous force, as demonstrated, traverses the trend of the "sympathetic," much slower than it does, that of the cerebro-spinal system; "resistance," a law of telegraphy, explains this. The smaller the wire, the greater the "resistance." The application of this law is patent to all. We have seen that the construction of the

"round circuit," and the "sympathetic," is alike, we now observe, that in function, the "Repeater,"* with its attachments, is a fac simile of the "sympathetic." The "Repeater" is a "centre," or "ganglion"; both the "ganglion" and "repeater" are what Draper says of the "ganglion": "A ganglion is the registering and preserving action," but they are more than this: They are the registering and preserving power, they are not only "magazines of force," but they are the preservers and regulators of force: We will see how this is accomplished. The "repeater" serves to prepare and also to regulate and register the electrical current under all circumstances, but is of especial importance in case of low-battery power, or other obstructions, and for the working of very long lines. It is like the "centre," in having attached unlimited number of lines; like the "ganglion," it has a local supply; it allows the manipulator to read from it, by virtue of its registration, as the electricity passes through. The "repeater" is a "centre," and a magazine of "force," in every particular, like a nervous centre. It concentrates the current from any direct attachment and that of its own creation, and compels it, as does the nerve "centre," to be propagated beyond in a definite and regular manner: It is an element of time. The "centre" throws its attachments in all directions; wires from the East, West, North, and South, in great numbers, are daily attached to the "repeater" and worked with all imaginable ease at the same time. Both the "centre" and "repeater" then strengthen and regulate the current, compelling it to indicate at distant points even better than a simple increase of force at terminal points.

Irritation of a nerve at any part of its course manifests itself at the part of final distribution. Irritate the wire, and the result is the same. The analogy is inexhaustible, space and time will admit of no further extension.

Now, as we so plainly see that the structure, arrangement, and function of the nervous and electrical systems are so similar, so precisely of the same principle, this query naturally pre-

* See Pope's Manual.

sents itself: Is the transmitting agency of these systems identical? Matteucci is undoubtedly the standard authority upon this subject. He presents three main propositions to prove the non-identity of nerve and electrical force—all are open to objection, and one at least to a fatal one. He says that "the conducting power of nerve for electricity is not more than one-fourth that of muscle, hence if the nervous force were electric, it would leave the nerve and follow the muscle." This reasoning is untenable, when we consider the fact, that the nervous tissue exhibits a conductor, with a perfect insulation; the nervous force traversing the "axis cylinder," which, to its microscopical ramifications, is kept isolated from all other tissue by this insulation; then, when a nerve is intact, it would be impossible for the nervous power to follow, from preference, muscular tissue. Does the fact, that muscular tissue is a better conductor of nervous fluid than nervous tissue itself prove anything? We know that the nervous system, in its normal condition, answers all the requirements of its possessor and its Divine Creator. The viscera, extremities, and each component part of the system, receive their necessary stimuli, enabling them to discharge their functions with consummate skill, just as long as the main battery (the brain) and its coadjutors, the local batteries, or centres, observe their normality. A preference for conductors does not exist when a poor conductor, in its course, rests upon a good conductor, or when a poor conductor has for its terminal attachment a better conductor, as in the case of the nervous and muscular tissue. The poorer conductor will remain charged so long as the force is maintained, the force, when reaching the better conductor, travels faster, as a matter of course, because it meets with less resistance. If a shock or succession of shocks were launched toward instead of on two conductors, we know that the superior one would receive its full charge before the inferior one became charged, this, however, does not apply to our author's statement. Matteucci's second proof is not convincing. "If a section of a nerve be removed, and its space be supplied with an electric conductor,

electricity still passes along the nerve, but no nervous force will be propagated to the parts beyond."

What are the inevitable results of the separation of a nerve? the lesion and separation of the wire of the frog not only allows of the escape of the fluid, as in the case of the disconnection of the telegraph wire, but it undoubtedly incapacitates the animal to a material degree for the renewal of this fluid or force; the human-battery power being only sufficient to meet the demands of nature, and the manufactory of this power only keeping pace with the demand. In my experiments, after getting a manifestation from a part for a further indication of the fluid, it was necessary to apply the wires to a point further on, or to an undisturbed portion of the nerve. Like all others, I failed to compel nerve-force to pass through a metal conductor, but this cannot be regarded as a proof of non-identity for many reasons. In the section, we first deprive the animal of a portion of its very existence, which assisted in the formation of the substance sought for, the animal is subjected to a terrible shock, seriously disturbing the function of the brain, the grand creator, or at least the controller of nervous force which is never excessive in health; we then further mutilate, break down, and destroy the tissues by the application of a metal conductor. Now, after this shock, this mutilation of tissue and destruction of the very force Matteucci sought to demonstrate in all its pristine vigor, through a metal conductor, by aid of his galvonometer, he desires that we accept the experiment as a proof of non-identity.

After obtaining a very decided proof of electricity from an animal, through one hundred feet of wire, I cannot doubt that were we able to make a proper connection with a few inches of wire, without any collateral escape, the nerve current would indicate itself to a slight extent upon a delicate galvanometer. It is well known that lines refusing to be utilized with low force of fluid, owing to bad connections and other obstructions, readily respond to a renewed or increased stimulus of battery-power; so with the nerve the electricity supplies the nervous fluid lost

by mutilation, escape, etc., and easily passes through the nerve and the metal conductor.

The next proposition, to a casual observer, appears to be an irrefutable argument in favor of the adherents of "non-identity. "If a nerve be ligated, its power of conducting nervous influence is lost, while it still transmits electricity." A ligature upon a nerve would, for many reasons, debar the passage of nerve force, while a stronger electrical force would pass beyond the ligature. If we ligate a nerve, we will either partially or wholly divide the "axis cylinder;" this may be effected without a rupture of the investing sheath. If we only sever a small number of the filaments, we decrease the conducting power, and each filament thus severed, is an "open wire," from which the nervous current will escape. Here we can readily conceive, from known laws, that if we carried our operation no further, we would not be surprised if the nervous power refused, through our most persistent efforts, to indicate its presence beyond the point of ligature; but we would confidently expect, in this case, to obtain a decided manifestation, if we greatly increase the nerve-force here, or apply a stronger electrical power. Of course, if we continue the ligation, we further break down and destroy the nerve, rendering it impossible for a weak nervous force to be transmitted, while the electrical shock might easily be made to pass the obstruction.

If we pursue, virtually, the same experiment upon the cable as we have done upon the nerve, exactly the same result would ensue.

Nerve-power rates at one or two hundred feet per second, while electricity rates at thousands of miles, or less, according to the conducting medium employed; but this does not deduce our argument; the cable is capable of a rate of eight thousand miles per second, our common ærial lines twelve thousand, and at a much higher altitude nearly twenty-four thousand miles per second is a recorded speed. Rate of speed of an imponderable substance then depends upon many conditions, especially upon size of conductor, material, insulation, and pressure. Of

forty superior substances used as insulating material, fat ranks No. 38; this fat is the insulation of the nerve. It has been fully demonstrated that the "gymnotus" and "torpedo" generate electricity, and those who never for a moment doubt this, argue that the reason why certain fish create electricity is "that nature has endowed them with certain organs—generators of electricity—which are called into activity by nervous influence." Nature has simply provided these fish with a powerful electrical battery, and has given them an extensive nervous system, so constructed as to serve as a means of self-preservation and subsistence. All then concede that electricity does traverse the nerves, in case of the "gymnotus," precisely in the same manner as nerve power; that the animal can, in every conceivable manner, compel it to obey the mandates of its instinct and will.

In my experiments upon cats, in every case after decapitation, I obtained a very decided manifestation of electricity from the brain and spinal cord; in each case the fluid obtained came from the grey matter only; the deflection of my galvanometer varied from 5° to 30°, this deflection invariably depending upon the time consumed in decapitation and application of the wires.

As we have seen, so far, all proofs as yet advanced against the identity of these forces in question can be successfully combatted. Indeed, it would be wonderful if we had not a decided quantity of electricity in the human economy. In the animal we have the three principal sources of electricity, heat, friction, and chemical action, each of these always present, ever producing it.

Why is it that this force, electricity, seeks the nerve for its habitat? It is almost impossible to not believe that electricity and nerve-power are not one and the same, when physics teach us that one will produce nearly every phenomenon of the other; these phenomena, it is unnecessary to discuss in detail. Now, then, as it is patent that the stronghold of those who contend against the identity, has not the impregnable walls its defenders would have us believe, their proofs are not at all abso-

lute. Of their doctrine, no proofs are vouchsafed; in fact, they do not even pretend to say how they might account for the fluidum nerveum, and much less do they inform us from *whence might* be its source. They admit their entire ignorance upon the whole question, and take refuge behind "inherent power." Forsooth! if we give to nerve and muscular cells inherent power, we might as well admit at once that all inert and inorganic matter possesses this same force. All bodies contain their quota of an imponderable substance, but we do not accord to all bodies "inherent properties." The pancreas, in their remarkable and peculiar function of emulsionization, the process of which we do not fully understand, and numerous other organs concerned in growth, nutrition, etc., are not spoken of as endowed with "inherent power." Manifestly, our Profession is prone to screen itself behind empty words, rather than make a candid confession, when they have under discussion the properties of nerve and contractile tissue, instead of awaiting for future science to explain, according to known laws, we write, argue, and teach pro-re-nata. That theory was the parent of fact, we must acknowledge, but this does not give us the prestige that we so readily assume in our argument upon a subject that has so little proof, *pro.* or *con.*, as the one at issue. In a late standard work,* we, with great surprise, read that "we should avoid making comparisons of the identity of these two forces, electricity and nervous force, that to believe in this 'identity' conduces to a vicious mode of study, for it draws away our attention from the phenomena themselves and their real characteristics, and leads us to deduce one set of phenomena from what we know of another." Why should we "avoid these comparisons?" Is it because of their beauty and truthfulness? How does the "belief in the 'identity' conduce to a vicious mode of study?" It must be fallacious reasoning that cannot withstand plain, simple, and veritable comparisons, which we know to be in exact accordance with physical laws; and if, as this author admits, that it deduces his mode of reasoning, or

* Dalton.

deduces one set of phenomena from what we know of another, his arguments and proofs have been constructed upon a quicksand, and if, perchance, it falls not of its own weight, the Profession must needs soon attack it so vigorously as to fell it with a single stroke.

It is an established fact, that the general phenomena of the nervous system are identical with those of electricity. Proof of this fact, so familiar to all, need not be discussed in detail. We know that the body is a constant source of heat, motion, and chemical action; these main sources, separately or combined, produce electricity—we use the term electricity only relatively—*electricity is found in the human body only as an incorporation of nerve tissue.* To the brain, the chief mass, and cardinal point of the nervous system, we might attribute the creative power and controller of this imponderable force; it is of all the organs the most abundantly supplied with blood; its vascularity, with its infinite labrynthian ramifications, afford an inexhaustible source of the three great imponderables.

When we know that the most transient thought of the day, or the fleeting fancy of a dream at night, cannot be created without waste and regeneration of brain or nerve substance, we at once comprehend the enormous and constant chemical change in this organ, which, even when at perfect rest, has its function to perform.

Looking at the brain, when only studying its general points, we cannot but observe that it bears the closest analogy to the "Repeater," of which we have before spoken; this instrument, like the brain, transmits synchronously in opposite directions, or upon a number of wires in the same direction with equal impetus.

In the study of a "centre," which might be designated a miniature brain, we find that they have a very large supply of blood; here we find the same principal changes we saw in the brain, the "centre" is a small reservoir of nervous power, acting precisely in the same capacity of a local battery, the necessary adjuvant of the "repeater."

We note here the beautiful adaptation of the "ganglion" in its distribution to the vascular system. The blood, carrying nutrition, etc., to a part, by virtue of the "centre," has a steady, unfailing nervous supply, which is transmitted unerringly and in the most definite manner. We have two absolute laws assisting in the government of the nervous and electrical systems; one, the law of "resistance," we have referred to. We will explain the other: "If the irritability of a nerve has been lost by the direct current, it may be recalled by the inverse current." In telegraphy, it is a common occurrence to change the electrodes, or as we say, to "reverse the batteries," to get a "better working wire." The sensation caused by pressure of the ulnar nerve cannot be distinguished from a slight electrical shock; the electrical and nervous forces act more vigorously at certain temperatures, and both cease to act if the temperature be too high or too low; osmosis, one of the most important phenomena of the body, is increased by electricity and nerve force.

We have proven that the inferior rate of speed of nerve power, to that of electricity, is no proof of non-identity, but only a proof of the greater resisting power, on which the speed of any imponderable force depends. It is shown in the case of the "gymnotus," that electricity traverses the nerve of a living body without injury to its integrity; in certain pathological conditions all admit the beneficial application of electricity, which gives to a part additional aid, compensating for the lost nervous fluid. Experiment proves the invariable presence of electricity upon the nerves, its quantity being in direct ratio to the amount of nervous matter; both are of imponderable nature. The mode of structure of the nervous and electrical systems, even to minutiæ, bears such decided analogy to one another, we may safely say that, considered in ensemble, they are exactly alike.

That electricity is always present upon the nerves, there can be no doubt; that it has an intimate and inseparable association with nerve power, there is as little doubt.

If we cannot assert their identity, the least that we can say upon the matter is, that nerve force cannot, or does not, exist without electricity.

NOTE.---This article was originally written as a thesis by Dr. Evarts at the period of his graduation in the Louisville Medical College, March, 1871. He received the prize awarded to the writer of the best thesis. The paper is not published on this account, or on account of Dr. Evart's past relation to the Institution mentioned; but it is presented on account of its extreme suggestiveness; on account of its originality; and lastly, because the "Prize Committee" (entirely disconnected with the College) thought that it ought to be presented to the Profession at large---ED.

ART. III.—SIGNIFICATION OF HÆMOPTYSIS. By J. A. LARRABEE, M. D., Louisville, Ky. Read before the Louisville Medico-Chirurgical Society, March, 1872.

The significance of pneumorrhagia or hæmoptysis presents a question of great practical importance, both to patient and physician.

The frequent and earnest appeals of patients and their friends to their physician for an opinion in their cases is sufficient evidence of the importance which they attach to this form of hæmorrhage.

Whether prudence, and the present welfare of his patient should cause the physician to withhold an unfavorable prognosis, it is no less important that his advice and treatment should be the result of a careful weighing in his own mind of so alarming a symptom. It is not a little astonishing that such different, and in some particulars entirely opposite views should be entertained upon this subject by the most careful bedside observers, as well as the most skillful and successful practitioners.

To many, cases of phthisis are associated with hæmoptysis in some part or another of their course, and we believe usually in the earlier stages that spitting blood or "bursting a blood-vessel," is considered among the laity as an indication of consumption, and this opinion is shared by many of the Profession.

While we do not desire to give any more weight to public opinion than belongs to it, we should not lose sight of the fact that the laity have an opportunity of watching and following up a case of hæmoptysis occurring in their friends or relatives seldom enjoyed by the physician in private practice.

As our object at this time is simply to present this subject to the Society in such a manner as to awaken a lively interest in its discussion, rather than to write a paper, let us examine what various writers have given us concerning the relation of hæmoptysis to pulmonary phthisis.

Louis states that, excluding cases of amenorrhœa and mechanical injuries of the chest, he did not find a single instance of hæmoptysis in 1,200 cases unconnected with tubercular disease of the lungs. Laënnec holds much the same opinion, and Audral states that, of persons who have had hæmoptysis, one-fifth have not tubercles in the lungs. Sir Thomas Watson says: "If a person spits blood who has received no injury of the chest, in whom the uterine functions are healthy and right, and who has no disease of the heart, the odds that there are tubercles in the lungs of that person are fearfully high."

The statistics of Audral would, it seems to us, be of more practical use if he had told us how many of his cases were the result of mitral obstruction constituting broncorrhagia.

Tanner states that two-thirds of all the cases of phthisis have hæmoptysis, and that it is more to be regarded as a warning of coming mischief, than of irremediable injury of the lung.

Niemeyer, however, after stating that bronchial hæmorrhage is "the most frequent cause of hæmoptysis," tells us that "it proceeds from rupture of capillaries, caused either by over-distention or else by a morbid delicacy of their walls—a result of perverted nutrition;" and ascribes the "trifling capillary hæmorrhage which occurs in bronchial catarrh" and diseases of the heart to the first, and the "large hæmorrhages" which poured into the bronchi are ejected by hæmoptysis to the "latter condition," and sums up his views of the relation of hæmoptysis to phthisis as follows:

1. "Bronchial hæmorrhage occurs oftener than is generally believed in persons who are not consumptive at the time of the bleeding, and who never become so.

2. "Copious bronchial hæmorrhage frequently precedes consumption, there being, however, no relation of cause and effect between the hæmorrhage and pulmonary disease. Here both events spring from the same source—from a common predisposition on the part of the patient, both to consumption and to bleeding.

3. "Bronchial bleeding may precede the development of consumption as its cause, the hæmorrhage leading to chronic inflammation and destruction of the lung.

4. "Hæmorrhage from the bronchi occurs in the course of established consumption more frequently than it precedes it. It sometimes, although rarely, appears when the disease is yet latent.

5. "When bronchial hæmorrhage takes place during the course of consumption, it may accelerate the fatal issue of the disease by causing chronic destructive inflammation."

Dr. Williams, in his admirable work on "Pulmonary Consumption," gives a careful analysis of 1,000 cases of phthisis, of which number hæmoptysis occurred in 569, including males and females, or in 57 per cent. of all.

These statistics and the further analysis of the 1,000 cases are founded upon the reports of Brompton Hospital for consumptives, and constitute the most reliable and valuable information upon this subject which we are able to obtain, and it is only by following up a case of hæmoptysis that we can be satisfied as to the result. After speaking of the relation and significance of hæmoptysis, Dr. Williams makes the following conclusion: "We have generally been able to detect signs of disease during life in the lungs of all those patients who have had hæmoptysis unconnected with heart disease, injury of the chest, or disorder of menstruation."

As to the first assertion here made by the world's greatest and best clinical observer, it is to be regretted that evidence of the

termination of the disease either by complete recovery or post-mortem non-evidence of tubercles in such cases of severe hæmoptysis is not at the same time given.

The second assertion, as far as we are able to understand its significance, goes to establish a degeneration—"predisposing to hæmorrhage," and at the same time to phthisis, which, so far from allaying our fears in regard to significance of such hæmorrhage, should awaken a lively anxiety for the future safety of such a patient.

In regard to the third assertion, there can be no doubt that the effects of a severe hæmoptysis must be extremely injurious to the tissue of lung still healthy—and the daily observations of practice will bring to mind many cases of men and women who date their present enfeebled and pathological condition to a severe hæmorrhage which, at some date perfectly fresh in their memory, came upon them as a peal of thunder from a clear sky, while they were in perfect health and in manly or womanly vigor.

But when in these cases we find physical signs, and perhaps cavity in the apex of such persons' lungs, we are at a loss to account for its hæmorrhagic origin. Such plugging up of branches of the finer bronchi with excavation should be in the base, where the laws of gravitation would carry the effused blood, rather than in the apex. Indeed, it seems a question in our mind whether such blocking up of portions of lung would cause excavation or simple collapse of the portion so excluded.

The fourth assertion must, we think, include a large number of cases of consumption. The first hæmorrhage, which is generally profuse; the cough and expectoration, which follow; the gradual return of the patient to a state of comparative health under proper care and hygienic surroundings with but slight physical signs; a fresh bleeding, which is sure to follow after a period of months, perhaps years; more prostration, more cough and expectoration, more physical signs, and perhaps again a more gradual return to a state of comfort. This, with the addition of the biannual variation at the vernal and autumnal

equinoxes, makes up a case of phthisis but too frequently met in our climate.

In regard to the fifth and last of the assertions of Niemeyer, we think there can be little doubt of its correctness. Hæmorrhage in well-established cases of consumption is not unfrequently followed by pneumonia more or less extensive. Only a short time ago we were called to visit a lady who had been under our care for phthisis pulmonalis for the past five years. (Her husband, also phthisical, died while under our treatment of pneumonia two years ago). Six years ago this lady had severe hæmoptysis, since which time she has presented physical signs, dullness, and tubular breathing over scapulæ and in front. No return of bleeding until the present attack, which was severe, lasting through several days, and was probably induced by over-exertion while cutting some meat for a customer in her store. A few days after the cessation of the hæmorrhage, her breath became short, skin hot, cheeks flushed. There was crepitation in lower lobe of right lung, with sibilant ronchus, distressing cough; and a pneumonia has occurred which, although now relieved, has placed her in an extremely low condition.

Hæmoptysis seldom destroys the patient at once, and sudden death from this cause is, we think, a somewhat rare occurrence, occasionally, however, the blood is poured out in such large quantity that it cannot escape fast enough by the mouth, and thus filling both mouth and nostril causes fatal suffocation, as in the case of Dr. Satterwhite's patient, reported at the last meeting of the Society. In such a case we should have little hesitancy in asserting that the hæmorrhage was the result of bursting of an aneurism. This cause will, we think, apply to most cases of sudden death from hæmoptysis. We are not aware that any one has shown the vessel from which the bleeding has occurred in hæmorrhage from bronchial arteries in any such case which has been examined in the dead-house. The great advance which has of late been made in pathology has done much to explain the changes necessary in the walls of the

pulmonary branches, to produce aneurism, by such great men as Rokitansky; but it has remained for Dr. Rasmüssen of Worroag to find such condition at the dead table to exist in nine cases of such death from hæmoptysis.

Our experience with arteries surrounded by ulceration has led us to believe that they are not apt to ulcerate; in fact, that they desist this process longer than any other tissue in the excavation, hence a cavity may exist in the lung across which blood vessels are stretched. These may burst by sudden exertion, and give rise to severe hæmorrhage.

The color alone of the blood expectorated cannot, we think, be relied upon as a distinction between hæmoptysis and hæmatemesis. We are certain that blood from the bronchial arteries should be bright and florid, but the hæmorrhage which we have attempted to describe, coming, as it does from the branches of the pulmonary artery, would be venous in character, except so far as it has been brought in contact with the air cells.

As to the effects of hæmoptysis upon the duration of phthisis, we find also much difference of opinion. It may occur during any of the stages of this disease, or it may not be present throughout its whole course. Moderate bleedings are not unfrequently followed by relief to the patient of the feeling of oppression about the chest which previously existed, and some physicians favor this view.

Certainly those who account for the hæmorrhage by the obstruction of pulmonory veins by pressure from tuberculous deposit, causing an overflow of the interrupted current into the bronchi, must regard moderate bleeding in this way as beneficial, and other than alarming.

Here again let us consult the valuable analysis of the 1,000 cases by Dr. Williams, founded upon the "Brompton Reports." Dr. W., after remarking upon the importance of the stage at which hæmoptysis occurs as bearing upon its significance, says that "hæmoptysis is more frequent as three to one before softening than after that process has taken place, and gives the following table of—

Stage.	No. Cases Hæmoptysis.	Moderate.	Per Cent.
1	187	20	13.95
2	65	16	24.61
3	31	21	67.74

Hence it will be seen that the occurrence of hæmoptysis during the latter stages of consumption during the periods of softening and excavation is more easily understood and explained, and is more significant than in the first stage; and its occurrence in the first stage when but slight, if any physical signs exist, is not so well understood, and not so easily explained, but is, so far as regards its power to hasten the desired effect, quite unimportant. In the few cases which we have had the opportunity to follow, and in private practice, it has seemed to us to hasten a fatal termination.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—A FULLY-MATURED TÆNIA SOLIUM, OR TAPE-WORM, EXPELLED FROM A CHILD FIVE DAYS OLD. Report of a Case Occurring in the Long Island College Hospital, Brooklyn, N. Y. By SAMUEL G. ARMOR, M. D.

The natural history of tape-worm parasites has been a subject of fruitful speculation, and so far as I am aware, the case here reported is quite unique. The tænia solium, according to Küchenmeister's investigations, "only occurs in children who partake of hog's meat." Neither he nor Cobbold makes mention of the possibility of a fully-matured tænia occurring in infantile periods of life. And Vogel says, in writing of tape-worm: "They are rarely found in children under one year of age, in nurslings probably never." This latter statement is in harmony with the generally accepted view, that animal food, either raw or partly cooked, is the probable source of the tænia solium."

The theory appears to have been generally accepted heretofore, that the encysted parasites are taken with the food into the stomach, and that the embryo, set free from the covering of the egg by a process of digestion, passes into the intestine, fixes itself to the mucous membrane, and, by a process of budding, produces the long, tape-like series of the articulations, which are finally converted into the full-grown tænia. Whether this be the universally accepted theory, or not, certain it is that the encysted parasite, found in whatever part of the body it may be, only develops to maturity in the *intestinal canal.* The query at once arises, therefore, How did the *cisticercus,* in the case here reported, gain entrance into the intestinal canal of the new-born infant? for it is difficult to arrive at any other conclusion from the clinical history of the case, than that the worm was fully matured at the birth of the child.

Without offering any speculations as to how the young tænia gained its embryonic *habitat,* I merely copy the clinical record of a case which recently occurred in the Long Island Hospital, Brooklyn, N. Y.:

Kate Quinn, aged twenty-four, an Irish servant girl, of apparently good health, was admitted to the hospital September 3, 1871. Diagnosis—*parturition* and a *primapara.*

In less than an hour previous to her admission she gave birth to a well-developed male child in the street, and, having no home, she was at once brought to the hospital.

September 4th.—Mother doing well; child nurses vigorously, and is apparently well.

September 7th.—Child for the last fourteen hours has refused to nurse, and examination reveals *trismus,* preventing introduction of little finger into its mouth, and touching extremities induces slight tetanic spasms. Ordered mild anodyne, but with no relief.

September 8th.—Babe seen by Professor Skene, who, supposing the child was suffering from intestinal irritation from some cause, ordered three $\frac{1}{6}$-grain doses of calomel, to be followed by oil, and at 7 P. M.—some ten hours after taking the

first dose of calomel—the infant passed, *per anum*, two segments of what was at once recognized from its obvious appearance as a *tape-worm*, flat, perceptibly cornuted, and possessed of slight wabbling motion of a minute's duration. The specimen, carefully picked out of the fæcal matter in the babe's diaper, was submitted to different members of the hospital staff, placed under the microscope, and the diagnosis concurred in that it was well-matured tænia solium.

September 9th.—Trismus continues; small amount of mother's milk fed by spoon; at 5 P. M. three more segments of worm came away; ordered spirits terebinth, 15 drops in mucilage.

September 10th.—One more segment voided; trismus remains; spasmodic action from touching extremities less; takes milk from spoon eagerly, but has no power to grasp nipple; repeated spts. terebinth.

September 11th.—Another segment came away; still makes fruitless attempts to grasp nipple; ordered oil of male fern, 15 drops in mucilage.

September 12th.—Repeated the oil of fern, to be followed by small dose castor oil.

September 13th.—One more segment passed; suspended medicine for a few days.

September 18th.—Two ½-grain doses of calomel ordered at intervals of two hours; soon after the administration of last dose four segments passed; trismus entirely gone; child nurses well, the mother having an abundant supply of milk; medicine discontinued.

October 18th.—Mother and child still in the hospital; both doing well; the child has passed several segments since last record, but none having the appearance of the head. Child has never taken any nourishment but the mother's milk.

The foregoing is the brief clinical record of the case; as to the facts stated there can be no doubt. The case was carefully and critically watched by Professor Skene, of the hospital staff, who was on duty, and T. H. Hutton, M. D., resident physician.

On October 2d, twelve of the segments passed were presented

to the Long Island College Hospital Society for examination, and, at their suggestion, B. A. Segur, M. D., a gentleman of skill and experience in the use of the microscope, was appointed to make further examination of the specimens. At a subsequent meeting of the Society Dr. Segur reported that "the specimens presented to him for examination had the obvious appearance of tænia, and under the microscope, with ½-inch objective, he was able to see the eggs, presenting the same size of joints passed by adults."

The specimens were subsequently presented to the Pathological Section of the Kings County Medical Society.

Can the mother communicate the germs of the parasite to the fœtus in utero? And, if so, how do they gain entrance to the intestinal canal?

To determine one of the questions, the mother, being still in the hospital, and having fully recovered from her confinement, was, on the 8th of November—about two months after the birth of her child—put upon treatment for tape-worm; although neither previous history nor present condition indicated the presence of tænia. She is an unusually stout Irish girl, of good flesh, good digestion, cheerful disposition, entire freedom from nervous disturbance, always rested well of nights, and never herself suspected the presence of tape-worm. However, for the purpose above indicated, the mother's bowels were thoroughly evacuated, and while fasting, she was ordered an emulsion of pumpkin seeds, which she faithfully took for twenty-four hours, at the end of which time she passed over seventy segments of tænia.

This completes the clinical history of a case which throws much doubt on the present-received theories as to the probable and exclusive source of tænia. That the encysted parasites gain entrance to the stomach and bowels by means of animal food containing the parasitic germs, the experiments of Küchenmeister and others leave no room to doubt. But that they may also

gain entrance through the mother to the fœtus *in utero* would appear to be equally well established by the case here reported. *New York Medical Journal.*

ART. II.—SUCCESSFUL APPLICATION OF THE TREPHINE OVER THE RIGHT LATERAL SINUS OF THE BRAIN. By PAUL F. EVE, M. D., Professor of Operative and Clinical Surgery in the University of Nashville.

I take leave to report the following unusual operation—the successful removal of four discs of bone from over and near the right lateral sinus: this, too, in direct opposition to our best authorities in surgery. Mr. Erichsen declares that "there are certain parts of the skull—over the venous sinuses, for instance, and near the base—to which no prudent surgeon would apply the instrument." Professor Gross, too, says: "There are certain parts of the skull where, if it is possible to avoid it, the trephine is never to be applied"; and he specifies the lateral sinuses, to which he makes an additional objection to operating over them, due to the inordinate thickness of the occipital bone.

My patient, Mr. D. P. Eubanks, a stout, healthy man, aged forty-two years, while sheriff of White county, Illinois, was struck from behind with a bludgeon, having a knot or bend in it, and knocked insensible for sixteen hours. This occurred two years and ten months ago; in the meantime he had sought relief by visiting Evansville, Cincinnati, St. Louis, etc., and found one surgeon who ventured only to cut down on the depressed bone. Finding I had returned from the last-named city to Nashville, he arrived here on the 25th of October, and was put upon treatment preparatory to a tentative operation at trephining.

Precisely midway between the occipital protuberance and the external meatus of the right ear, there was a depression in the cranium of about three-quarters of an inch in depth, with

the circumference of a silver half-dollar. This resulted from the blow already referred to; and while the patient had not become epileptic, he yet experienced symptoms demanding operative interference. One professional gentleman, as we have already mentioned, had attempted this. Mr. Eubanks was now habitually costive; walked with difficulty, and only a short distance; complained of constant weight and oppression in his head; of a dull annoying pain, radiating at irregular intervals from the point injured; had lost his energy; was never cheerful, and was losing flesh and strength. Nothing could provoke a smile; was almost hopeless, and said that he occasionally felt like losing his senses.

Dr. Buchanan unexpectedly coming into my office, first encouraged an operation, by stating that his father once saved a patient in whom the longitudinal sinus had been opened; thus confirming the opinion that wounds of the large venous canals of the brain were not necessarily fatal.

On the 28th of October (Dr. Buchanan being indisposed), assisted specially by Dr. Briggs, Drs. Van Lindsley, Fitts, and others, and before the class, the usual crucial incision was made over the depression in the skull; then, by detaching the occipital portion of the occipito-frontalis and the insertion of the trapezius muscle, thus getting below the superior curved line of the os occipitis, the half-inch crown of Galt's trephine was applied, and, working it very cautiously, in about fifteen minutes a button of bone was removed, fortunately, too, without wounding the dura mater. It was our design to cut through the osseous structure, found, happily, quite thin, directly above the right lateral sinus, and now, by sawing out three other circular pieces of bone, it was made evident that our object had been carried out; for in the space made by the elevation of these three discs, lay, undisturbed, the lateral sinus, readily recognized by the deeper color of its venous blood. Nothing now remained to complete the operation, which was performed in about forty minutes, but to cut off the angles left by the trephine, round off the bony opening, and secure

over it, by silver-wire sutures, the four angular flaps of the scalp. Some five ounces of blood were lost, but only one artery was tied. Coming from under the influence of ether, the patient expressed himself feeling better, and was soon after conveyed to the hospital.

He was put upon the most rigid after-treatment—absolute diet and perfect repose. A slight reäction the next day was met by small doses of sulphate of magnesia; and he subsequently experienced not a serious symptom. Of course, one so long and so seriously afflicted could not recover at once, and had periods of depressions, but nothing more. Locally, cold cloths were applied, then changed to emollient tepid poultices; a very blunt probe was inserted every day or two, at the most pendant cut, to prevent accumulation under the scalp, which gave exit first to sanies, for some days, when the wire sutures were removed, and gradually the secretion became lessened and converted into laudable pus. The wound was thus kept open to the thirtieth day, when it gradually closed.

The case found most similar to the one here presented, is recorded by my friend, Prof. F. H. Hamilton, in his "Treatise on Military Surgery," page 220, where he notices the injury sustained by a lad ten years of age, who was brought into Bellevue Hospital with fractured skull, made by the wheels of a street car. A fragment of the occipital bone had lacerated the lateral sinus, the hæmorrhage was profuse, but completely arrested by a pledget of lint secured by a roller. The patient, however, died during the night, due, undoubtedly, to the extensive fracture of the os occipitis and injuries within the cranium.

The learned Velpeau published that Warner, Marchetti, Garangeot, Sharp, Pott, Callisen, Mosque, and Lassus, had opened various sinuses of the dura mater, and without unhappy results; and moreover, that Biluger, Copland, Gooch, Abernethy, and Hutchinson, had exposed the brain in perforating the occipital bone. Over the protuberances of the cerebellum, he adds that there are no arterial branches except the occipital,

and the lesion of the trapezius or complexus muscles is not of much importance.

Prescott Hewett, Esq., the author on Injuries of the Head, in "Holmes's System of Surgery," declares that the trephine has been applied, and successfully, too, close to the foramen magnum occipitis.

In the French "Dictionary of Medicine," in thirty volumes, article on The Trepan, we translate that surgeons have been forbidden to operate over the course of the venous sinuses of the brain for fear of hæmorrhage resulting. This, however, is not so dangerous as was formerly believed, as the blood does not flow from them with much force, and the slightest compression will arrest it; so then, continues he, these operations may be performed when a fracture compresses the venous canals, or spiculæ of bone are thrust into them.

Knowing full well the responsibilities involved in the above case, the operation would not have been attempted, but for the presence of the patient's father (now aged seventy-two), and the valuable assistance of my colleague, Dr. Briggs. Its successful termination is due, in my judgment, much to the good conduct of the patient himself, to the thinness of his cranium where trephined, and particularly to the fact that the dura mater was not opened. For this all-important result we are much indebted to the instrument revived by Dr. Galt, of Virginia, in 1860—the conical trephine.—*Monograph.*

ART. III.—OXYGEN IN LUNG DISEASES.

Dr. Henry N. Read reports at length, in the "New York Medical Journal," twenty-one cases of lung disease, occurring in hospital and private practice, treated by the *addition* of *oxygen gas* to the *regular treatment* of these affections. In some cases no good results were reached, but others were greatly improved. The Doctor remarks, that he has found it of especial

value in those cases of phthisis which were unable to get out of doors. "In the cases of acute pneumonia in which it was given, it invariably had the effect of easing the labored respiration in the early stages, and of promoting the resolution and absorption of the inflammatory products." The beneficial effect of the gas was marked in that troublesome affection, *chronic bronchitis*, increase of appetite, weight, and diminution of the paroxysms of the cough usually following its exhibition." That our readers may be able to apprehend more clearly the nature of the cases, and the result of their treatment, we have condensed in a table the most prominent features of the histories. It is to be remembered that the gas was added to the ordinary treatment of each disease, not substituted for it:

No.	Age	Weight on entering.	Occupation.	Disease.	Time of treatment.	Am't gas given per day.	Weight on leaving	Result.
1	34	128 Lbs	Sailor.....	Chr. Pneum. 2d st'g	3 mos	3 galls	139 Lbs	Cured
2	26	133 Lbs	Sailor	Phthisis Pulmonary	10 mos	4 galls	149 Lbs	Cured
3	29	134 Lbs	Sailor.....	" " 2d st'g	9 mos	4 galls	136 Lbs	Cured
4	48	116 Lbs	Printer ...	" " 3d st'g	6 mos	4 galls	.....	Better
5	43	146 Lbs	Sailor.. ...	" " 2d st'g	3 mos	3 galls	164 Lbs	Cured
6	48	.....	Seamst'ss	Chr. Pneum, 2d st'g	3 wks	2 galls	.....	Cured
7	32	106 Lbs	Tailor.....	Phthisis Pulmonary	3 mos	2 galls	120 Lbs	Cured
8	50	129 Lbs	Stone Mas	" " 3d st'g	2½mos	4 galls	127 Lbs	Better
9	21	130 Lbs	Sailor.....	" " 3d st'g	3 mos	4 galls	134 Lbs	Better
10	33	147 Lbs	Sailor.....	Chr. Pneumonia.....	3 mos	2 galls	168 Lbs	Cured
11	26	.....,	Laborer ..	Acute Pneum 1st st'g	1 mo	2 galls	.....	Cured
12	26	136 Lbs	Laborer ..	Phthisis Pulmonary	1 mo	3 galls	156 Lbs	Cured
13	22	138 Lbs	Carman...	" " 1st st'g	1 mo	4 galls	147 Lbs	Cured
14	33	133 Lbs	Sailor.....	Chr. Bronch. 3d st'g	3 mos	2 galls	145 Lbs	Cured
15	23	116 Lbs	Sailor.....	Phthisis Pulmonary	2 mos	4 galls	.....	Died
16	23	.....	Porter. ...	Pneumonia, 3d st'ag	3 wks	4 galls	.....	Cured
17	24	111 Lbs	Mechanic	Phthisis Pulmonary	1 mo	4 galls	.....	Died
18	30	126 Lbs	Laborer...	" " 2d st'g	3 mos	3 galls	134 Lbs	Cured
19	64	136 Lbs	Sailor.....	Chronic Bronchitis..	3 mos	4 galls	152 Lbs	Cured
20	22	.....	Sailor.....	Chronic Pneumonia	3 mos	4 galls	.....	Cured
21	33	126 Lbs	Sailor.....	Chronic Pneumonia	4 mos	4 galls	.....	Died

From this table a better general conception of the effects of oxygen may be noted than from any brief word description. Like every other therapeutic agent, oxygen gas is not appropriate to every case of even lung disease. The problem now to be determined is to ascertain in what conditions it is indicated. The history of these cases shows that the oxygen rendered more comfortable even those who were so far gone that it could not arrest the disease. Further, it prolonged life con-

siderably. This effect our associate (Prof. Andrews) observed in a marked degree last summer, while administering the gas to a patient far gone in the last stages of phthisis pulmonalis. It will be observed that all cases of phthisis, in the first or second stages, are reported as cured, while many in the third stage were made much better. All cases of chronic bronchitis are reported cured; also all cases of acute pneumonia and most of the chronic ones.

M. Rabot, a pharmacist of Versailles, has proposed and carried out successfully the disinfection of hospital wards by oxygen. We give, condensed, some of the remarks made by the editor of "L'Union Medicale" upon this process, as given in the "Boston Medical and Surgical Journal": "In the first half of 1868, hospital gangrene appeared twice in three of the wards of the hospital at Versailles. Circumstances prevented the removal of patients from the wards, and the means of disinfection ordinarily employed signally failed. It then occurred to M. Rabot to make use of oxygen in the infected wards." Every evening, he says, "a quantity of oxygen was generated in a large iron retort, and by means of a rubber tube was thrown into each ward in amount equal to the thousandth part of the capacity of the ward. In the morning the wards were aired as usual, whenever the state of the atmosphere allowed; then, after closing the windows, a second supply of oxygen was introduced. At the extremity of each ward there was placed in a receptacle a mixture of peroxide of manganese, 500 grammes; solution of hyperchlorite of lime, 5 kilogrammes." This caused the constant disengagement of oxygen. The results were, on the first morning, a diminution of the odor, before exceedingly disagreeable. This continued until it entirely disappeared. From day to day the wounds became more normal, free suppuration was established, and cicatrization advanced rapidly. At the end of two weeks every ill symptom had disappeared. Gangrene appeared again two months later, and the trial of the same remedy was made with like success. The same result was attained in another institution under similar conditions."

In the "*Medical Record*" Dr. Haywood calls attention to the use of oxygen in the cold, congestive stage of cholera. He says that the severity of this is greatly mitigated by the administration of this gas, and mortality assuredly lessened.

For several months Professor Andrews has been employing this gas as a medicine in various diseases, and will ere long give to the Profession the results of his observations. He obtained gas from the Medical College laboratory. Those of our friends in or near the city who wish to try the gas can obtain it at the same place. Should any do so, we trust they will publish the results of their observations. It is only by recording a large number of cases that deductions of any permanent value can be obtained. The gas can be readily made by a simple apparatus, as that of Dr. Smith's, made by Tiemann & Co., of New York.

ART. IV.—TRANSACTIONS OF THE MEDICAL SOCIETY OF THE DISTRICT OF COLUMBIA—PRECOCIOUS MASTURBATION. Published by Authority.

February 16, 1870, Dr. Thomas Miller related the following case of a child ten months old, who exhibited the precocious tendency of rubbing itself and compressing its penis until it produced a regular orgasm. But little attention was paid to the fact at first, as it was only noticed occasionally; but a month later, the act had been repeated twice in fifteen minutes, the orgasm lasting for at least a minute, leaving the child as relaxed as if it had had an emission, which did not take place, with perspiration on the brow, pale lips, and hurried breathing. At the commencement the penis would become perfectly erect, and at its close would relax and fall. The child passed his water freely, with a good stream, in the Doctor's presence, and soon after commenced the excitation, by pressing its abdomen and crossing the legs. On recovery it played around, and in fifteen minutes' time repeated the act, which almost amounted

to a convulsion. The child was well developed, hearty, and healthy, with a good wet-nurse. He thought the brain might be affected, and gave pot. bromid. grs. iss. three times daily, with cold ablutions to the spine two or three times daily. Whenever the impulse was noticed cold water was applied to the pubes, and the child gradually lost the habit. Three or four days ago it was not practiced oftener than once in forty-eight hours, and it has no longer frequent erections. He did not examine the urethra or bladder, but there was an elongation of the prepuce, the bowels were open, and the appetite good; it sleeps alone, on a hair mattress, with, at his recommendation, a hair pillow. Its nights were restless before taking the medicine, but it never committed the act until after the warm bath in the morning. The nurse was not allowed to indulge in stimulants. The earliest case he had ever seen was in a child of six years, with a large penis and emissions.

Dr. Antisell thought the case might as well be referred to reflex irritation of the spinal cord as of the brain.

Dr. Borrows mentioned the case of a Jewish child of six years, where the habit had evidently existed for some time, with evident emissions, and produced chorea. He recommended pot. bromid. in five-grain doses at bedtime, and zinci. oxid. grs. iiss. morning and noon.

Dr. Miller had seen, more than once, boys of ten years with gonorrhœa, which they contracted from their nurses.

Dr. Hall thought the condition of the spine should be carefully considered in all such cases, and mentioned the case of a gentleman who, when recovering from a protracted sickness and very much emaciated, while lying upon the sofa upon his back, suffered from frequent emissions, and found that a thick welt in the pantaloons pressed upon the spine, and was the cause.

March 9th.—Dr. Miller reported that the child had almost stopped the habit, now making its attempts only once in two or three days. After one of its orgasms a mucus discharge had been noticed. He was at present using a stimulating liniment to the spine.

Dr. Busey had seen a report by Vogel of masturbation in a female child of eleven months.

October 10, 1871.—Dr. Miller states that he continued to attend the case for a year after his first report, the patient having entirely recovered. The use of the bromide of potassium was continued, with occasional use of stimulating applications to the spine for some months. A French nurse was employed by the family, who, at the Doctor's suggestion, was discharged, soon after which the habit subsided. Circumcision was proposed for relief, but the parents opposed it. After one of his orgasms there was a discharge of limpid mucus.—*Nat. Med. Jour.*

ART. V.—QUADRUPLE GUN-SHOT WOUND THROUGH THE CHEST—RECOVERY WITHOUT REMOVAL OF THE BALLS. Reported by Dr. F. W. LORIUSER. Wien. Med. Wocheuschr, xxi. 12, '71.

N., forty years old, weak and emaciated, having become tired of life, procured a four-barreled revolver, loaded it, and placed it upon the bare breast, close to the skin, between the second and third rib, on the left side, one and a half inches from the margin of the breast, and fired, the ball entering the chest. He then fired the second shot, placing the revolver between the third and fourth rib, and the third between the fourth and fifth rib. This not proving sufficient, he had strength enough left to empty the fourth barrel, the ball penetrating the chest between the fifth and sixth rib. He then fainted, and was soon after found by Dr. Loriuser, lying on a lounge, exhausted from the hæmorrhage, pale, but declining surgical aid. The wounds bled moderately, the surrounding region being blackened by the powder. Respiratory motions were hardly perceptible on the left side, pulse very small and hardly accelerated, motion of heart very feeble. The breathing was laborious and stertorous, bright-red lumps of blood were coughed up. Auscultation and percussion were not permitted.

Cold water dressings were applied to the left side of the chest, and changed every ten minutes during the night. No sleep, great apathy. In the morning radial pulse plainly felt, the hæmorrhage had completely ceased, painful coughing brought up bloody sputa. Percussion anteriorly gave a full tympanitic sound indicating the escape of air into the pleural cavity, no respiratory murmur was heard in the portion of lung corresponding with the wounds. In the apex and lowermost portion of the left lung indistinct respiratory murmur, sounds of the heart feeble, but distinct and clear. The patient was only able to lisp a few single words. He was undressed and placed in bed on the third day; he partook of some broth, and drank a great deal of water. On examining the back, a blue spot was found below the left scapula, and the finger soon discovered there a ball immediately under the skin. The ball was not extracted, as it caused no inconvenience to the patient. Nothing could be discovered about the seat of the other three balls. The tympanitic sound was also elicited posteriorly on the left side. The breathing was laborious, the patient complaining of a stitching pain on the left side below the axilla during inspiration and coughing, the bloody spitting continued, the color of the expectorated blood having become of a dark-red color. Anteriorly a slight friction sound was heard in the region of the wounds, there was also paresis of the left arm.

The patient improved slowly but decidedly. The pneumothorax disappeared, vesicular respiration could be heard in the vicinity of the wounds, only the friction sound and the chocolate-colored sputa still continued. The patient was able, although with difficulty and pain, to sit up in bed without any support; had an appetite, and could speak. The wounds secreted but little pus. In the night of the seventh or eighth day suddenly an attack of asthma set in, which continued the next day, but yielded to the use of morphine and cherry-laurel water. The patient then improved readily, the wounds healed up entirely, the sputa were colorless after fourteen days; vesicular respiration was again heard in the left side, a weakness of

the left arm and pain in the left side alone remaining. Another attack of asthma, with subsequent loss of sleep and appetite, kept the patient in bed four weeks. After this the patient recovered rapidly, being enabled to go into the country after a treatment of twelve weeks. He did not desire the extraction of the ball situated under the scapula.—*Schmidt's Jahrb. No.* 5, '71.

ART. VI.—THE DIAGNOSIS OF URETHRAL AND VESICAL DISEASES. By Sir HENRY THOMPSON, Surgeon to the University Hospital.

The following lecture was delivered at the University College Hospital on November 21, 1871, and published in the "British Medical Journal":

I commence to-day my usual course of lectures, modified somewhat by circumstances. Thus I condense a little my opening remarks on diagnosis to-day. I may premise that I give this course of lectures on the diseases of the urinary organs, because my wards offer you so large a field for their study, and also because there is no class of diseases in which you can afford so much relief to the patient as in this, or so certainly mitigate suffering. There are no diseases more painful, and none the relief of which will gain you more gratitude from your patients.

In the matter of diagnosis, however, it is of the greatest importance that it should be a correct one, and not only correct, but rapidly made. I have now to say what I have said to you before, that I interrogate all these patients on the same system, and I advise you to follow this plan. I employ only four questions for urinary patients, and I advise you to use these four questions also, and always in the same order. The first question is, Is there any deviation in the frequency of passing urine? The second is, Is there any pain in the act? The third is, Is there any blood in the urine? And the fourth is,

Are the characters of the urine altered (quality and quantity)?

We shall see that in all cases of urinary disease these four questions are sufficient, together with the supplementary inquiries which arise out of them; yet we know how often such cases are misunderstood—indeed, the simplest are often mistaken, through not pursuing a systematic question of *frequency*. Almost every disease of the urinary organs produces some deviation in the natural frequency of passing urine. As a rule, let it be understood that a man in health does not generally rise at night to pass urine, and that he passes it during the day about five or six times; but when there is any degree of inflammatory action in the mucous membrane of the bladder, however slight, frequency of micturition is induced. Now, how does cystitis produce this increased frequency? When the mucous coat of the bladder is inflamed, it cannot bear to be much extended; and when the bladder contains five or six ounces of urine, or even less, the sensitive mucous membrane suggests that it should be emptied; instead of comfortably containing fifteen or sixteen ounces, it cannot endure the extension, and calls on the muscles to contract without delay. There is one, and one only, of these affections which does not necessarily produce, at first, frequent micturition. I speak of stricture; here it always occurs after a time; but a man may have a considerable amount of stricture for years before he is troubled in the way referred to. Calculous disease produces cystitis, and thus causes and increased frequency in passing urine.

Now, as a supplementary question, you should next ask, is the frequency greatest at night or in the day? If a man have calculus in the bladder, he is not so much disturbed at night, but in the day he is frequently micturating—all movements make him do so. Now, that extremely common complaint, *hypertrophy of the prostate*, is worse at night than by day, as far as frequency of passing urine is concerned. Hence, if a man of about sixty years of age says that he has but recently had urinary troubles, and these are greatest by night, the case is almost made out; you may be sure that a very little further

inquiry will demonstrate the fact that he is the subject of hypertrophied prostate.

I come to the second question of *pain*. This question is of greater significance. Suppose the patient says he feels pain. Where do you feel pain—low down in the belly? Then there is almost certainly chronic cystitis. Suppose he says that his pain is in the penis or perineum, you must ask if he feels the pain before, during, or after passing urine. If the pain be before, the reason of this is that the mucous membrane is becoming uneasy in consequence of distension. If he find it painful during or after passing urine, and in the end of the penis, he is likely to have stone; and especially, also, if the pain be increased by exercise. The pain is at the end of the penis in stone. It is almost pathognomonic of calculus to find the pain near to the end of the penis during and after micturition. In chronic prostatis, the pain is also at the end of the penis. This simulates calculus in the bladder more than any other disease.

The third question is, Has *blood* passed? This brings us nearer still to the point. Blood may be seen in cystitis, but very rarely. The mode and the circumstances in which the blood has passed, however, determine the nature of the disease. An elderly man, who passes blood intimately mixed with the urine, dark in color, and not altered much by circumstances, with frequent rather than painful micturition, has probably hypertrophy of the prostate. In calculus of the bladder you find blood—it is as common in calculus as hæmoptysis is in phthisis. Then a calculus patient will find blood in the urine after a drive or a ride, or after hunting, and none if he keep quiet; or he may pass a drop or two with the last expulsive effort at micturition, and with pain at the time. Such urine is usually florid in tint, while, generally speaking, blood passed from the kidney remains long in the bladder, and, from contact with the urine, becomes brown in color—it is like porter. This, also, may happen when the bleeding is due to hypertrophy of the prostate.

Lastly, Is the *character* of the urine perceptibly changed?

A man will often tell you his urine is thick; but he does not discriminate between the thickness of pus or mucus, and that from deposited salts, as lithates. Patients are generally very much disturbed unnecessarily on account of thick urine. In cold weather, the urine, on cooling, deposits its lithates readily, where none would be seen in summer; and you may tell him that, if he apply a little heat to it, he can see for himself that it will become quite clear again, which is never the case if the thickness be due to organic matters like pus or mucus; and if this be not an habitual appearance, you may make light of it. If, on the other hand, a heavy deposit of lithates be constant, you must look into his habits and correct his digestion—probably restrict some indulgence in diet. If, also, the urine do not become clear with heat, you have an organic compound to deal with, and you must find out carefully the source of it.

Let me advise you always to make your patient pass his urine in two vessels for examination. I should not thank you for an examination of urine passed into one vessel; for whatever a man may happen to have lying in the urethra—a passage which is by no means always clear and sound—passes with it. Let him pass an ounce or two into one vessel, and examine only what you find in the second vessel. If there be gleety discharge, if there be stricture of the urethra, you will find shreds of pus and mucus and blood-corpuscles in the first glass, but not in the second. In chronic prostatitis, always in hypertrophy of the prostate, sometimes there will be a deposit in the first vessel, which would much mislead you if you imagined it to come from the bladder or kidney. This specimen you must examine for albumen, for sugar, and you must inquire also the quantity passed *per diem*. Well, then, if a patient have told you that he has frequency of passing urine, increased by exercise; that he has pain at the end of the penis; that he passes blood; and that his urine is changed, you may arrive at a pretty good diagnosis of his case. But you would be very much to blame if you did not further examine the man; you

must pass an instrument. It is best to be straightforward with patients and tell them so. People have too much common sense to be dealt with otherwise than plainly in these matters. You need not always sound a man with a stiff, rigid metallic instrument at first, who has never had an instrument of any kind in his urethra. It is best to take a soft instrument, pass it gently into the bladder, which produces very little discomfort, and so diminish the patient's fear. You can then say, I will pass another instrument (which will give you a little more pain), and ascertain completely what is the matter.

[Sir Henry Thompson then exhibited the various instruments used in the diagnosis of diseases of the bladder and urethra, and explained their several uses—promising to continue the subject on the next occasion of his lecture.]—*Ex.*

ART. VII.—DIAGNOSIS BY EXAMINATION OF URINE IN OBSCURE FORMS OF URINARY DISEASE. By Sir HENRY THOMPSON, Surgeon and Professor of Clinical Surgery to the University College Hospital.

I wish to call attention to a mode of obtaining a diagnosis in some rare and doubtful cases of disease of the urinary organs, when all other modes have failed. I described it first in my clinical lectures at University College Hospital some years ago, as a means of observation which had never to my knowledge been recommended or practiced, and which I had adopted systematically, and which I have since found of extreme value in some exceptional instances. Thus, for example, we not seldom meet with a patient whose urine, usually containing a small or varying quantity of blood and pus, presents more or less albumen, but relative to the precise origin of which it is desirable to be certain. Some of the deposit produced is of course due to the admixture named; and while we may be right in believing the quantity to be equal only to the blood and pus in the urine, we cannot be certain whether some of it may not be

due to renal changes. In such a case the other signs and symptoms, also, are often insufficient to enable us to say whether they are due solely to vesical disease or to pyelitis, or whether they may not be some renal affection, not to say constitutional albuminuria, complicating the conditions named. On the other hand, the symptoms may apparently indicate only an affection of the bladder; there may be no symptom of disease involving any higher portion of the urinary tract; nevertheless, the experiment to be described may prove the kidneys to be almost solely the seat of the malady. Few cases present more of obscurity than some of those with the characters thus briefly indicated.

The proceeding may be described as follows: A No. 6 or 7 flexible catheter is introduced into the bladder while the patient is in the upright position, and the urine drawn off is placed in a vessel apart. By means of an elastic gum-bottle containing a few ounces of warm water, the bladder is washed out two or three times, with about an ounce or two at a time, until the out-flowing fluid is perceived to be quite clear. The catheter being left *in situ*, fresh urine from the kidney, untainted by any admixture, will now pass by drops into a test-tube placed to receive it; and a specimen, therefore, of true renal secretion, unqualified by vesical products, will be furnished in about five minutes, sufficing for a chemical analysis and useful to a certain extent for microscopical observation. By this simple process I have been enabled to solve the question of disease of the kidneys in some cases in which hitherto doubt as to their implication existed; and have often had the satisfaction of demonstrating that the secretion obtained direct from the organs were absolutely free from any sign of disease, where they had previously been suspected to be the seat of grave mischief. But there is one source of fallacy on applying this test which is occasionally to be met with. An illustration of it exists at this moment in the case of a man now in my ward at University College Hospital. If the bladder easily bleed with integumental contact, as occasionally happens, the process may produce a slight ad-

mixture of blood in the urine so obtained, barely enough to tint it, but sufficient perhaps to occasion a considerable deposit to heat and nitric acid. It should never be forgotten, in estimating these products, that, for equal quantities of blood and pus, the former produces a much more bulky deposit of albumen than the latter. Of course, then, this disposition to slight bleeding, as a result of the procedure, and any augmentation of albumen so caused, is of itself strong evidence of vesical rather than of renal disease. I should say that the incident just named is one of rare occurrence.—*Brit. Med. Jour.*

ART. VIII.—SANITARIUM FOR INVALIDS. By W. PRATT, M. D., Chico, Cal.

In crossing our continent from ocean to ocean, on the various routes, I found that on the eastern side of the Sierra Nevada mountains, in the northern counties of California, the climate possesses the nearest equilibrium of temperature, both in winter and summer, with the least atmospheric moisture of any portion of the United States. Throughout this extensive and beautiful belt of country there are mineral waters of every variety and temperature, while the atmosphere is ever charged with the odor of the pine and balsam of fir. The scenery is grand, varied, and extensive beyond description. Wild game and mountain trout are exhaustless.

For the last fifteen years, when able, I have practiced in the upper Sacramento Valley; but when overdone and exhausted by the debilitating climate, a visit to that favorite retreat has never failed to immediately revive and invigorate both mind and body. I have also, with unvarying success, sent my patients, when suffering from general debility, from whatever cause, in the same direction—varying the altitude according to the case.

With the evidence thus obtained, I feel justified in believing

this the best natural location for convalescents, invalids, and consumptives, on our continent, if not the best in the civilized world; and when its advantages become generally known by the Profession, enterprise will not be slow in developing, and art in improving, the facilities for its enjoyment by valetudinarians.

If any professional brother, or his friend, to whom life has become a burden, wishes to test the virtue of such a climate, and will meet me at my rendezvous next summer, at the Big Meadows, in Plumas county, I will take pleasure in gratuitously directing his efforts in so laudable an undertaking.

The locality referred to is also a delightful field for the able-bodied who seek recreation and sport, as well as for the invalid.—*Boston Med. and Surg. Journ.*

ART. IX.—FORMER TREATMENT OF THE LEPER. By J. GORDON, M. D.

The subjects of this "most vile of all diseases" were, as a body, regarded alike by the Church and by the people as objects of disgust. The canons of the Church of Scotland, as drawn up in the thirteenth century, deal with the unfortunate lepers more humanely than most other ecclesiastical judicatories; for after recommending them to be admonished to respect the churches of their districts, it is added, that if they cannot be induced to do so, let no coërcion be employed, seeing that the affliction should not be accumulated upon the afflicted, but rather their miseries commiserated. But the contempt displayed towards them seems to have been almost proverbial, so late as the age of Elizabeth. Thus Shakspeare makes Margagaret of Anjou exclaim to the afflicted and suspicious Henry VI., after the murder of his uncle, the Duke of Gloucester: "Why dost thou turn away and hide thy face? I am no loathsome leper: look on me." According to the tenor of various

old civil codes and local enactments, when a person became affected with leprosy, he was looked upon as legally and politically dead, and lost the privileges belonging to his right of citizenship. By the laws of England, lepers were classed with idiots, madmen, outlaws, etc., as incapable of being heirs. But it was not by the eye of the law alone that the affected was looked upon as defunct, for the Church also took the same view, and performed the solemn ceremonials of the burial of the dead over him, on the day on which he was separated from his fellow-creatures, and confined to a lazar-house. The various forms and ceremonies which were gone through on this occasion are described by French authors; but it is highly probable that the same observances were common in our own country, and therefore adhered to in the Leper Hospital of the Brigend.

A priest, robed with surplice and stole, went with the cross to the house of the doomed leper. The minister of the church began the necessary ceremonies, by exhorting him to suffer, with a patient and penitent spirit, the incurable plague with which God had stricken him. He then sprinkled the unfortunate leper with holy water and afterwards conducted him to the church, the usual burial services being sung during their march thither. In the church the ordinary habiliments of the leper were removed; he was clothed in a funeral pall, and while placed before the altar, between two trestles, the *Libera* was sung, and the mass for the dead celebrated over him. After this service he was again sprinkled with holy water, and led from the church to the house or hospital destined for his future abode. A pair of clappers, a barrel, a stick, cowl, and dress, etc., were given him. Before leaving the leper, the priest solemnly interdicted him from appearing in public without his leper's garb; from entering inns, churches, mills, and backhouses; from touching children, or giving them aught he had touched; from washing his hands, or anything pertaining to him, in the common fountains and streams; from touching in the markets the goods he wished to buy with anything except his stick; from eating and drinking with any others than lepers;

and he specially forbade him from walking in narrow paths, or from answering those who spoke to him in roads and streets, unless in a whisper, that they might not be annoyed with his pestilent breath, and with the infectious odor that exhaled from his body. He was compelled to ring a bell to give notice of his approach. And last of all, before taking his departure and forever leaving the leper to the exclusion of the lazar-house, the official of the church terminated the ceremony of his separation from his living fellow-creatures by throwing upon the body of the poor outcast a shovel of earth, in imitation of the grave.—*Journal Cutaneous Medicine.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

THE COMMUNICABILITY OF SYPHILIS BY VACCINATION. (Inaug. Diss. von A. Rahmer, Breslau, 1869).

Köbner states, as the result of numerous experiments, where inoculation was effected by fluids containing the syphilitic virus in a very diluted state (as, for example, the blood in certain periods of constitutional syphilis), that the quantity used is a factor of great importance in the solution of the problem. The attempts at inoculation made by Waller, Pellizari, Thiry, and the anonymous surgeon of the Palatinate, were always negative when the experimenters trusted to small scratches with the lancet, and successful only when a *large* quantity of syphilitic blood was brought in contact with extensive absorbing surfaces, produced by vesication or by cut-cups. It is therefore impossible, argues Rahmer, that the minimum amount of blood which may be mixed with the vaccine lymph should be, as Viennois, stated in 1860, the only vehicle by means of which syphilis can be communicated by vaccination. Again, the small number of inoculations by means of syphilitic blood, as compared

with the frequency of the cases when the disease follows vaccination from the arm of a person afflicted with syphilis, is a powerful argument against the theory that the blood is the only carrier of the poison. According to the statistics published by Roberts, based on nineteen inoculations with syphilitic blood, the disease followed vaccination from infants affected with syphilis in 66 per cent., while the inoculations succeeded in only 26 per cent.

According to the experiments of Schreier and others, syphilis cannot be communicated by means of the clear, unmixed vaccine lymph taken from the arm of a child known to have constitutional syphilis; nor is this possible, as Boeck has shown by his inoculations, even of lymph mixed with blood which is taken from the vaccine vesicle of a syphilitic child, unless the blood is present in a larger quantity than is usually the case in vaccination. Hence, according to Köbner, we must seek another vehicle, and this is the secretion of a local syphilitic affection, which has its seat in the basis of the pseudo-vaccine pustule. This may present itself either in the form of an ulceration or commencing induration, dating back only to the time of vaccination, or it may be an infiltration, which is a local manifestation of constitutional syphilis which has already existed some time. For instance, if a child with latent hereditary syphilis, or, it may be, manifest constitutional syphilis, is vaccinated, we find that after a few days a syphilitic infiltration takes place around the vaccine vesicle, which itself follows a perfectly normal development. If the lymph from this vesicle be used in vaccinating another child, and, through carelessness, the product of the syphilitic infiltration also be conveyed on the point of the lancet, the disease will certainly be communicated to the healthy child, and we will have a specific ulcer developed at the place of inoculation, either at once, on the eighth or tenth day, or subsequently, in the cicatrix itself. As a rule, the vaccine pustule has a normal appearance on the eighth or tenth day after vaccination, and the first symptoms of constitutional syphilis appear from four to eight weeks later. The sup-

position of so rapid a manifestation of constitutional syphilis after vaccination is at variance with the opinions of former observers, who have described a period of incubation lasting several weeks; it is, however, in strict accordance with the experiments of Köbner and Bidencap, which show that the inoculations of the secretions of the products of secondary syphilis may produce pustules, and subsequently ulcers, in a space of time varying from forty-eight to seventy-two hours. Bohn, from whose review of Rahmer's thesis this abstract is taken, urges the necessity of a stringent adherence to these rules: 1. That the pure, clear lymph alone should be used. 2. That this should be taken from children who are at least from three to six months old, since by this time hereditary syphilis, if present, will certainly have manifested itself.—*Med. Times.*

An Important Fact in Therapeutics.—At the recent annual scientific meeting held at the New York Medical University, Professor Scott read an interesting paper upon an entirely new method of treating cancer, which gives promise of the alleviation of much human misery. The treatment of cancer has hitherto been empirical and unsatisfactory—chloride of zinc, nitric acid, and arsenic, the remedies usually employed, being painful, dangerous, and unreliable.

Professor Scott's discovery consists in applying to the surface of the sore the *chloride of chromium*—a new salt of this rare metal—incorporated into stramonium ointment. This preparation, in a few hours, converts the tumor into perfect carbon, and it crumbles away. Specimens of cancers thus carbonized were inspected by a number of physicians present, which had the appearance of charcoal, and were easily pulverized between the fingers.*

The remedy causes little or no pain, and is not poisonous. A considerable number of cancers have been cured by this means, and an agent of such marvellous efficacy must ere long be

* No one, of course, expects true cancer to be "cured," or even permanently removed by simply destroying its local manifestation. This statement is published to direct attention to a comparatively recent caustic.—Ed.

adopted by the entire Profession.—*New York Commercial Advertiser.*

Succedaneum for Skin-Grafting.—Under the heading of "Skin-Grafting Superseded," the "Medical Press and Circular," referring to Dr. Fiddes's statement that no skin need be taken, but merely a few epidermic scales, editorially suggests a professional trial of a popular method of healing old ulcers by means of the "skin of a new-laid egg." The egg must be fresh laid; and the membrane, which is easily detached from the inner surface of the shell, is to be smoothly spread over the ulcer. Our contemporary has lately heard of a case in which this method "was completely successful after years of ordinary treatment had failed."* It is not stated whether the cicatricial tissue manifests any tendency to grow feathers in such cases.—*Cincinnati Lancet and Observer.*

Therapeutic Effects of Gelseminum.—Dr. E. A. Anderson, of North Carolina, experimented very extensively during the war with the gelseminum, in his efforts to find some agent that would serve the purpose of quinine in intermittent and remittent fevers. He now uses this agent—the gelseminum—almost exclusively in intermittents, especially in children, to whom it is especially adapted, from its absence of any of the unpleasant taste of quinine. He has seldom been disappointed in its effects. He employs the tincture (℥iv. bruised root to Oi. alcohol) or the fluid extract of Tilden. Dose in proportion to 20 drops to an adult. It should, like quinine, be given before the expected paroxysm; four to six doses should be given before its onset is expected. He says: "I have found it a reliable agent in intermittent, remittent, and typhoid fevers; acute and chronic rheumatism; in inflammation of the lungs, pleura, and in pneumonia. I have, for several years, used it almost exclusively in pneumonia, in place of veratrum, and consider it the best agent in this disease. You can reduce the force and frequency of the circu-

* The egg-membrane has several times been thus successfully used in this city.—Ed.

lation with it, as certainly as by digitalis, venæsection, or veratrum, without the distressing effects of these agents, while, at the same time, it allays the morbid heart, restlessness, and irritating cough."—*Journal Materia Medica.*

Prostitution and its Sanitary Management.—In an elaborate article on the subject, in the "Chicago Medical Examiner," Professor Edmund Andrews sums up as follows:

1st. The European compulsory registry only enrolls a small fraction of the women.

2d. The system of forced medical examinations, with attempts to consign the diseased to hospital prison, totally fails to abate the prevalence of disease.

3d. It is better for us not to copy European failures, but to develop our own system.

4th. This system should consist, on the part of the police, in a strictly tacit toleration of the orderly prostitutes, a private classified registry, free hospital assistance for the diseased, and fines and imprisonments for the disorderly.

5th. On the part of society, there should be an extension of the present efforts to reform the fallen, and to rescue the young candidates for shame. Measures should also be taken, through the pulpit and the press, to warn the unwary of the physical as well as the moral dangers of licentiousness, and of the inefficiency of all known measures to render prostitution safe.—*Ex.*

Three Cases of Bronchocele Successfully Removed.—In 1866, Dr. Wm. Warren Greene, of Maine, published in the "Medical Record" the report of a case of large bronchocele successfully removed, and advocated the propriety of an operation in similar cases.

He ("Am. Jour. Med. Sciences") has now the satisfaction to add two other successful cases, and believes that a careful examination of them will convince his professional brethren that excision of an enlarged thyroid gland is a legitimate operation. The two latter patients were females, aged 40 and 35 years.

The steps of the operation, as he performed it, are briefly

these: 1st. Exposure of the tumor by linear incision of ample length, avoiding most sedulously any wounding of the tumor or its fascia propria. 2d. Division of the fascia propria upon the director. 3d. Its reflection and the enucleation of the tumor with *the fingers and handle of the scalpel*, paying no attention to hæmorrhage, however profuse, but going as rapidly as possible to the base of the gland and compressing the thyroid arteries. 4th. Transfixion of the pedicle from below upward with a *blunt* curved needle armed with a double ligature, and tying each half, or, when practicable, dividing the pedicle into as many portions as there are main arterial trunks and tying each portion separately. 5th. Excision of the gland and subsequent dressing of the wound as in ordinary cases.

In conclusion, he remarks that it is and always will be exceedingly rare that this operation is warrantable; *never*, for relief of deformity or discomfort merely; *only*, to save life.—*Ex.*

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—SICK HEADACHE. By J. W. WEBB, M. D., Liberty, Mississippi.

Case 1.—Mrs. C., aged fifty years, had suffered with sick headache for twenty-five years. She could be relieved sometimes with an opiate or purgative, and again, every article of medicine given would fail, and the disease run its course in twenty-four or thirty hours. I was called to see her on the morning of the 3d of April, 1871, at 2 o'clock, A. M. She was taken sick the day before, and had taken a dose of Epsom salts. I found her slightly delirious, and learned from her daughter that she had a light spasm about 1 o'clock, and an involuntary discharge of urine took place; the bed was thoroughly saturated. I gave her a little brandy; she soon became rational,

knowing nothing of what had taken place. She has not been sick from that day.

Case 2d.—Mr. M., aged forty-eight years, had periodical attacks of sick headache from boyhood; had taken various remedies; sometimes one would relieve him, and again the same remedy would as signally fail. On the morning of May 29, 1869, I was called to see him. Found him delirious, and his bed saturated with urine, and learned from his wife that he had taken a dose of Tarrant's aperient on going to bed. The discharge of urine was involuntary. I gave him a little whiskey, and he soon revived, and never had a return of his sick headache. He died last Fall of consumption.

Query.—What physiological or pathological change took place in the system that caused these involuntary discharges of urine, and what effected the cures?

ART. II.—RARE CASE. By C. P. WHITEHEAD, M. D., Lake Providence, La.

The subject of my remarks is a man about forty years of age, with a disposition that would be natural to one much younger. He has been accustomed to "spreeing" intermittently for twenty years; during these twenty years he did without drinking once for an interval of two years. I am informed, however, that he was seldom a teetotaler for more than a few weeks at a time. An acquaintance of a year leads me to believe that I have been correctly informed.

I was summoned on the morning of the 16th of November, 1871, and found him suffering from a mild attack of "mania a potu." I prescribed potassii. bromid., ℥ ss.; extract valerianæ fluidi f℥i every two hours until two or three doses had been taken.

Called again at 3 P. M. I was told by his wife that he had just informed her, by note, of his inability to articulate a single

word. He denied having any pain or soreness anywhere when I questioned him in regard to the air passages—making his replies on a paper or slate. I examined his throat carefully, but could find no indication of inflammation. Tried to surprise him into speaking. He corresponded with me in a perfectly intelligible manner, which proved that if he had any mania at all, it was in regard to his inability to speak.

I immediately concluded that I had a case of pseudo-aphonia, or, if preferable pseudo-aphasia. His wife being in delicate health, I disliked to tell her my opinion, knowing that she would, in her then state of mind, repudiate the idea that "the Colonel could speak if he would only think he could."

I called, in consultation, Dr. W. D. Bell, of this place. As usual, I told him what I thought was wrong; and he, after an examination, agreed with me that it was an hallucination. We, without hesitation, told him he would be all right in a few days, withholding, however, what we thought caused his present inability (?) to speak. At his and his wife's request, we called Dr. Houghton, who had been the family physician of both for twenty-five years. Dr. H. agreed with us.

At Dr. H.'s suggestion, the following was prescribed:

℞. Ipecac gr. x., ant. et pot. tart. gr. ij., and cataplasm to back of the neck.

November 17*th.*—His wife said he had muttered an indistinct sentence last night in his sleep. He complained of a "full feeling in his throat," which was probably due to the action of the emetic.

November 18*th.*—His wife is certain he pronounced her name last night. Reïterated his inability to speak. Contrary to orders, he still drank; and would have been discharged but for personal considerations. (We may have been wrong to have discharged any one?)

November 19*th.*—No change.

November 20*th*, 21*st*, 22*d.*—Same, except drinking nothing but wine, and using deaf and dumb alphabet, which he seemed only to have then remembered.

November 23*d*. He commenced to speak, and rapidly regained his full power of speech. Dr. H. informed me on the 22d, that he had seen patient about five years ago with pseudo-paralysis of one leg.

The patient is now healthy, sober, and strong; he has been extraordinarily muscular, and could knock down and whip any one of the hundreds he has fought, though only 5 feet 5 or 6 inches in height.. He is very intelligent and quick at repartee.

Would be glad to have comments from yourself and any of your readers.

NOTE.—Diagnosis of pseudo-aphonia or pseudo-aphasia untenable. Do not the symptoms, history, and results of the case demonstrate this? Hallucination, with some cerebral paresis, resulting from the abuse of alcohol, seems to have been the morbid condition of the patient. If Johnson, the great lexicographer, had seen the last prescription, he certainly would have adopted it as the best meaning of the word rouser.—ED.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

KENTUCKY STATE MEDICAL SOCIETY.

The Seventeenth Annual Session of this Society was held in Louisville, Ky., April 2d, 1872.

At 11 o'clock A. M. the meeting was called to order by the President, T. N. Wise, M. D. A very appropriate and eloquent prayer was delivered by the Rev. W. H. Platt. The regular Secretary, Dr. W. B. Rodman, being absent, Dr. C. F. Uhlrich was requested to act in his place. The Chairman appointed the usual Committee of Credentials; it consisted as follows of Drs. Wible and Galt, of Louisville; Newland, of Hopkinsville; Brown, of Lincoln; and Luckett, of Owensboro. While this Committee retired, Dr. L. P. Yandell, Sr., offered, in behalf of the Committee of Arrangements and the College of Physicians

and Surgeons (a local Society) an earnest welcome. At the close of his address, Dr. Gaillard asked that the Medico-Chirurgical Society and the Obstetrical Society, both of Louisville, be placed upon the record as tendering also their welcome to the delegates. The members of the Society now enrolled their names, as follows:

List of Members.—T. N. Wise, H. Brown, L. P. Yandell, Jr., S. A. Foss, L. P. Yandell, Sr., B. M. Wible, J. J. Speed, W. T. Owen, J. W. Holland, T. A. McGregor, J. M. Keller, G. S. Bryant, W. O. Roberts, W. S. Chipley, C. F. Uhlrich, D. W. Yandell, John D. Jackson, R. W. Dunlap, S. B. Mills, E. S. Gaillard, G. W. Ronald, Wm. Bailey, P. B. Scott, C. Rogers, Geo. Beeler, D. H. Jessup, J. O. Green, Oscar Newland, R. C. Holland, L. J. Frazee, W. W. Senteny, E. Richardson, F. C. Leber, W. H. Galt, R. H. Thornton, T. P. Satterwhite, Lewis Rogers, J. A. Larrabee, D. S. Reynolds, W. W. Goldsmith, Joseph W. Thompson, A. R. McKee, H. Miller, L. B. Todd, J. A. Ireland, J. W. Clemens, R. O. Cowling, W. A. Atchison, H. F. Barnes.

Upon recommendation of the Committee on Credentials, the following physicians were elected as members:

List of New Members.—James Knapp, J. H. Leslie, W. H. Way, J. Y. Newkirk, —— Orendorf, F. C. Wilson, Duff Child, F. F. Pollin, John Gordon, C. Becker, John Goodman, J. A. Octerlony, D. T. Smith, —— Burdett, E. Given, R. H. Isham, W. H. Wathen, H. C. Christ, T. Anderson, W. S. Huff, —— Johnson, C. B. Doll, Thomas J. Griffiths, W. P. White, C. W. Kelly, G. W. Griffiths, B. F. Owens, I. H. Warren.

President presented communication from Dr. Thomas J. Griffiths, Surgeon in charge of the United States Marine Hospital at this Post, inviting the members to visit the Hospital at any time most convenient to them. The invitation was promptly accepted, and the thanks of the Society tendered.

Dr. Edward Richardson then offered the following resolutions:

WHEREAS, It is necessary for the dignity, honor, and usefulness of all societies and professions that certain rules and regu-

lations should be adopted for their government; and whereas, the American Medical Association has, for the government of members of the Medical Profession throughout the country, adopted and promulgated what is known as the code of ethics; and whereas, with a view to the furtherance of that object, local medical societies have been established throughout the country, acting under said code of ethics; therefore, be it

Resolved, That no physician shall be entitled to membership in this State Association who is not a member of some such local Society, if such exist in his city, town, or county.

Resolved, That no local Society shall be recognized by this Association which does not adopt and enforce the code of ethics for its government.

Resolved, That no physician is entitled to membership in this Association, or to recognition of the Profession, whose professional conduct is known to be in violation of the code of ethics as interpreted by the local Society of his city, town, county, or district.

A protracted and animated discussion took place on these resolutions, which was participated in by several members.

Dr. R. C. Holland thought that there was often a good reason for an honorable physician to decline to become a member of a local organization. He had had some experience in this matter. The code of ethics was the subject of much wrangling, to the exclusion of other important matters. In fact, we heard too much of ethics and too little of more practical subjects. The American Medical Association had adopted a code of ethics. In the local societies the talk was mainly about ethics. And now we have ethics up here. It was all the time ethics, ethics, ethics. He hoped that ethics would be allowed to take its regular course, and that the practical business of the session proceed in order.

Dr. Richardson said that he was proud of the code of ethics. He wanted every Society, State and local, to become an ethical Society, and he wanted the distinction between ethical physicians and empirics to be as wide as the gulf which separated Lazarus and Dives. There was no danger of any honorable physician being hurt by these resolutions. Laws were not made for honest men, but for rogues. The resolutions endorse

the national code of ethics, and he wanted all members of societies to be loyal to that code. If this Society could not endorse that code, it was time to organize a Society which could.

Dr. Chipley said that the code of ethics put forth by the American Medical Society had already been adopted by this, and there was no necessity for the preamble and resolutions. The system of individual membership had been adopted at the Frankfort session, on account of the failure of the local societies to send delegates. He thought with Dr. Holland, that there were more important questions for the consideration of the session.

Dr. Keller thought the resolutions ought to pass. An individual might become a member of this Society when there were no delegates from his local Society present, and at the next session the delegates from that Society might appear on the floor and inform the State Society that it had admitted an unworthy member. Every physician ought to be connected with a local Society, if there was one in his vicinity, and that Society would be far better able to judge of the character of a physician whose daily practice is conducted under their own observations than the State Society could be. Besides, where else could applicants get credentials, and what was the use of a committee on credentials if no credentials were required?

Dr. Chipley moved to lay the preamble and resolutions on the table.

Dr. Richardson called for the ayes and noes on that motion.

The ballot resulted—ayes, 47; noes, 17; and the preamble and resolutions were therefore tabled.

Dr. Richardson moved that a copy of the resolutions and the vote on Dr. Chipley's motion be sent up to the American Medical Association at its next session.

Dr. Chipley moved to add the reasons of each for voting yea or nay.

Dr. J. C. Holland moved to lay the whole subject on the table.

Dr. Richardson remarked, that he was not surprised at the

tenderness of some of the gentlemen; when the vote was taken it resulted—yeas, 25; nays, 29.

A motion was then made to adjourn till 3 o'clock, P. M., which was carried; and the meeting adjourned.

AFTERNOON SESSION.

The afternoon session was mainly consumed in reading papers. A number of essays were read, as follows: By Dr. Joseph W. Thompson, on Resections, with known results; Dr. Jackson, on Hygiene; Dr. L. P. Yandell, Jr., on the Sphygmograph; Dr. S. Brandeis, on Chloral Hydrate; Dr. L. J. Frazee was invited to read his paper (prepared for a previous meeting) on the mineral waters of Kentucky. He courteously yielded the floor, however, until the next day.

After an exchange of opinions, it was finally voted that the President should now and hereafter deliver his address on the second day of the session, and that the old officers of the Society should retain their positions until the close of the entire session; the newly-elected officers not to assume their official functions until the succeeding annual meeting.

It was resolved that the fraternal greetings of the Society be telegraphed to the Tennessee Medical Society, now in session at Nashville.

This motion was misunderstood by a number of the members, who thought it was a motion for adjournment of the session, and when it was carried many left the hall, only some fifteen or twenty remaining.

The President appointed the Committee on Nominations as follows: Dr. H. Miller, Louisville; Joseph W. Thompson, Paducah; L. B. Todd, Fayette; R. H. Thornton, Campbell; H. Brown, Lincoln; J. D. Jackson, Boyle; D. A. Pollin, Washington; W. H. Atchison, Warren; George Beeler, Hickman; —— Burdett, Garrard.

Dr. J. M. Keller moved a correction in the minutes of the previous session; that the new by-law should read as follows:

Resolved, That any member of this Society who has been or shall be expelled by any local Society, in connection with the

State Medical Society, for any violation of the code of medical ethics, shall be suspended from membership in this Society until an appeal can be taken, or until there be a reversal of decision by said local Society, when, if at the next meeting of the State Society there be no successful appeal made, or there meanwhile be no reversal of action on the part of the local Society, the name of the offending member shall be stricken from the roll of the State Society.

The meeting then adjourned till 10 o'clock A. M., April 3d.

Morning Session—Second Day.

The State Medical Society met at 10 o'clock.

Election of Officers.—The Committee on Nominations reported the following officers, who were duly elected: For President, Dr. Lewis Rogers, Louisville; Senior Vice-President, Dr. James W. Thompson, Paducah; Junior Vice-President, Dr. Joseph Smith, Lexington; Recording Secretary, Dr. J. A. Larrabee, Louisville; Treasurer, Dr. L. B. Todd, Lexington; Corresponding Secretary, Dr. W. T. Humphreys, Louisville; Committee on Publication, Drs. John Goodman, S. Brandeis, and T. P. Satterwhite, Louisville; Librarian, Dr. R. H. Thornton, Newport.

Amendment to the Constitution.—Dr. J. M. Keller offered the following amendment to section 2 of article 3 of the Constitution, defining the qualifications for membership:

Section 2. Every candidate for membership, whether permanent, temporary or honorary, must be a graduate of a regular medical school in good standing, and a member in good standing of a county, city, or local medical society which adopts for its government the code of ethics of the American Medical Association, provided such local society exists. The credentials necessary to satisfy the committee that such is the applicant's standing shall be a certificate from such local society, signed by its president and secretary. If no such local society exists in the county, city, or town in which the applicant lives, he shall present his petition in writing, endorsed by two members of the State Medical Society who can testify to his professional and social standing. In either case, upon a favorable report from the Committee on Credentials, the applicant shall be balloted for, and if he receives four-fifths of the votes of all the members present, shall be declared a member. This is understood to apply to the present members as well as to future applicants for membership.

By the rule this amendment lies over until next annual session.

Dr. Keller also offered an amendment to section 7 of the by-laws, making the appointment of the Committees on Credentials and Ethics the first order of business.

Charges Against Dr. D. W. Yandell.—Dr. E. S. Gaillard said:

Mr. President,—It has been the custom of our Profession from time immemorial to place those in office who are distinguished for their support of the honor and character of the Profession. That precedent has been almost without contradiction for years. But we are all familiar with the fact, that during the past year this precedent has been violated, and that, too, by our largest Medical Society in the United States, the American Medical Association. I do not say that this was done intentionally.

I am far above dealing in personalities here. I respect this Body too much. I respect my profession too much, and I respect myself too much to dishonor this occasion by personalities. I have a special motion to submit, and I claim the right to a few introductory remarks. In my judgment, and in the judgment of a vast number of gentlemen who enjoy my especial respect and confidence, the precedent just alluded to by me has been violated during the past year. I take occasion, in the most public manner, to state this fact, and I will give the reasons upon which my judgment is founded.

I am very well aware there are gentlemen in this Society who hold that the American Medical Association, like the French king—can do no wrong. "*Marcus Dixit: ita est.*" The Association has spoken, and it must be so. I do not subscribe to that law. I feel that we are all competent to question the corporate as well as the individual action of medical men. I questioned such action last summer; I do so to-day.

At the last meeting of our American Medical Association, there was a president elected, unworthy of his position. I thought it was a serious injury to our Profession throughout the country, and especially to our own State, and I so stated. These are the reasons for bringing the matter before this So-

ciety to-day. There are thousands of physicians throughout the United States who are thoroughly satisfied that I am to make this issue before the American Medical Association; but many distinguished gentlemen, in New York, Philadelphia, and other large cities, whom I am proud to number among my friends, have informed me that they do not question the sincerity and truth of what I said, but they could not take action upon the character of any member who came acknowledged by a State Society, and unchallenged there.

Now, my claim before this Society is not a matter of favor, but of justice and right. If I am wrong in my charges, I say that I shall be one of the very first to acknowledge the fact, and make the most perfect reparation that one man can make to another. I have no personal feeling animating me; far from it. I am simply in my station trying honestly to discharge a duty that I believe to be a duty. I say again, that if I am proved to be wrong, it shall be my pleasure to anticipate all other men in the statement of my error. But if I am indeed right, then, sir, I could not do a more useful act than to bring this matter before the members of my profession. If this gentleman is such as I have stated, he is not a worthy member of this State Society, or of any Medical Society in good standing in the United States.

Whereas, from time immemorial, it has been the custom of the Medical Profession to expel from its Body those who, by dishonorable practices bring disgrace upon it; and whereas the usual method for securing such action has been the formal presentation of charges with specifications against the unworthy member, I hereby prefer the following charges, with the proper specifications, against Dr. David W. Yandell, of this Society, and a member of the Medical Profession of this city:

Charge 1.—Frequent falsehood; that even so late as June, 1871, he had been guilty of conscious and demonstrable falsehood.

Specification 1.—In that he publicly denied that at the pe-

riod of his examination for his medical degree he was rejected, and subsequently allowed to graduate per gratia.

Specification 2.—That in June, 1871, he publicly declared that Dr. Daniel Drake had complimented him upon the examination for his degree, when, on the contrary, this distinguished gentleman had stated to some of his colleagues, and to others in this city, that the said examination was exactly opposite in character to that which Dr. Yandell has since represented Dr. Drake to have declared.

Specification 3.—That in June, 1871, he publicly declared, as an evidence of the acceptability of his election to a chair in the University of Louisville, that one of the most distinguished members of the Faculty had called to congratulate his family upon his election, when, as Dr. Yandell well knew, this gentleman had really called, at his request, to state to Dr. Yandell's family that he (Dr. Yandell) had been unavoidably detained in Cincinnati.

CHARGE 2.—Persistent literary theft—openly charged upon him, and acknowledged by himself.

Specification 1.—In that such literary theft is manifest in his so-called letters from Europe, and that in one of these letters, written in his office, in this city, he was actually detected in such literary piracy; that such piracy was directly charged upon him in his office, and the charge admitted by him to be correct.

CHARGE 3.—Conduct unbecoming a medical officer and a gentleman in the Confederate States Army.

Specification 1.—In that at the same time at which he complimented by letter a distinguished medical officer of the Confederate States Army in very high terms upon his administration of the military hospitals in one of the chief cities in Tennessee, he was at that very period using all his influence for the removal of that medical officer, and for the substitution of one of his own family in the same position, and when charged with this act by the injured officer, and denounced in the presence of witnesses for his personal and official perfidy, he was unable to deny his act.

CHARGE 4.—Conduct unbecoming the upright and honest physician.

Specification.—In that, on his return to this city after the late war, he published, or caused to be published, or allowed to be persistently published in the daily papers, without contradiction, and for many years, even to June 1871, (when his life was reviewed), that his position in the Confederate States army was such as to have highly increased his operative surgical skill, and perfected his judgment in surgery, when it has been notorious that Dr. Yandell's record in the Confederate Army was such as to make him a source of absolute discredit to the service, and such as to preclude the possibility of his having enjoyed the practical advantages since that time so noisily trumpeted.

CHARGE 5.—The public repudiation of that code known as the Code of Medical Ethics, which constitutes the fundamental law of this Medical Society, and of all respectable medical societies, and which is recognized as the guiding and governing principle of all physicians in their intercourse with each other.

Specification.—In that he has on many private occasions, and on one special public occasion, during the convention of one of the largest medical societies of this State, derided and denounced this code as a "damnable code," and, to use his language, as "all bosh;" thereby debarring him, if such charges be true, of membership in this Society, or in any reputable Medecal Society in the United States. All of which is respectfully submitted. E. S. GAILLARD.

I now move that the Chair have discretionary power to appoint a special committee of gentlemen, who, so far as he knows, have not expressed an opinion upon this matter, to investigate the charges.

Dr. Galt moved that the charges be referred to the College of Physicians and Surgeons of Louisville (a local Society).

The President—I feel it to be my duty to declare this whole thing out of order. I think these local matters should be

brought before the local Society to which members belong. This Society has no time to sit as judges of local matters.

Dr. Gaillard then appealed to the House from the decision of the Chair.

Dr. Gaillard—Mr. President, I rise and claim the privilege of explaining the position which I hold. It would have been my pleasure to have brought this question before the local Society of which Dr. Yandell is a member, but every gentleman living in this city knows and will testify that it is absolutely imposible to bring the facts before such a jury and have the matter fairly heard. I say this without desiring to reflect upon that Society. I state it as a fact, and this is my reason for not bringing the matter before the Society mentioned. A very large portion of the membership of that Society has been dissolved, and the remaining members, representing chiefly Dr. David Yandell's family, colleagues, and immediate friends, constitute a jury before whom I would not, so long as I had my senses, present a question of this kind.

We, as members of this Society, have the right to differ with the Chair in his rulings, and I appeal from the decision made. I ask that the roll be called upon the question.

Dr. Gaillard, before the calling of the roll, directed the attention of the members to that clause in the Constitution of the Kentucky State Medical Society which makes it obligatory upon that Body to try and punish its own members. He read this clause of the Constitution aloud.

The ayes and nays being taken, the vote stood as follows:

Ayes—Messrs. Brown, L. P. Yandell, Jr., Speed, Galt, Chipley, Mills, Clemens, Knapp, Isham, Huff, White, D. T. Smith, Watkins, Hall, Palmer, C. Rogers, Ulrich, Lowry, Alcorn, Jos. Smith, L. P. Yandell, Sr., R. C. Holland, J. W. Holland, McGregor, Roberts, D. W. Yandell, Ronald, Beeler, Given, Way, Johnston, Kelly, Crawford, Vaughan, Burdett, Perkins.

Nays—Messrs. L. J. Frazee, F. C. Leber, T. P. Satterwhite, W. W. Goldsmith, J. D. Jackson, E. S. Gaillard, R. O. Cowling, R. Y. Newkirk, F. C. Wilson, C. B. Doll, C. H. Todd, Ed. Rich-

ardson, J. M. Keller, D. S. Reynolds, Henry Miller, William Bailey, —— Wathen, Turner Anderson, Isaac Warren, J. A. Goodman, W. O. Atchison, J. W. Thompson.

Drs. Wible, Owen, and Thornton asked to be excused from voting.

Dr. Lewis Rogers said that he had just come in and did not understand the question.

The decision of the Chair was sustained by a vote of 36 to 22.

Dr. Beeler said the State Society had a Committee on Ethics, whose business it was to take cognizance of matters of this kind, and he thought the charges should be acted upon in some way by the Society.

Dr. Richardson said he was a member of the College of Physicians and Surgeons, but was opposed to having this question referred to them, because the State Society was the proper tribunal to try the offences charged.

Dr. Keller said he would vote for the appeal, because he wanted to see this question of ethics settled forever. He thought the State Society was the proper tribunal to settle it.

Dr. Chipley said so far as he knew there was no difficulty among the brethren of the Profession in this State upon questions of ethics except in Louisville, and if these gentlemen had any quarrels upon that question, let them settle it among themselves. He had come a hundred miles for the purpose of learning something from the medical brethren, and he didn't want to see all the time occupied in settling difficulties (!) among Louisville gentlemen. When they had local difficulties in his town they settled them, and didn't trouble the State Society.*

* Here is a sublime piece of impudence from a member whose repeated and apparently endless labor during the entire session seemed to be to twit the physicians of Louisville with their moral relations with each other; or, as he termed it, with their professional quarrels with each other. Homilies on personal or professional morals come with bad grace indeed from one whose moral relations before the public as late Superintendent of the Eastern Lunatic Asylum were such as to cause general suspicion and distrust. It is to be hoped that this prick of the lance will be sufficient to

Several other members voted for the appeal, for the reason that the Constitution makes it the duty of the State Society to investigate the conduct of its own members.

Dr. Gaillard then said that he knew beforehand the futility of sending the matter before the College of Physicians and Surgeons, and rather than allow it to take that course, he would withdraw it, which was done.

An invitation from Mayor Baxter, and Mrs. Gary, the Superintendent of the City Hospital, to visit the Hospital, was read before the Society.

On motion, the thanks of the Society were tendered to the Mayor and Mrs. Gary for their polite invitation.

According to appointment, Dr. Frazee rose to read a paper on the Mineral Waters of Kentucky.

Dr. Ronald moved that he be not allowed to read his paper, on the ground that Dr. Frazee did not hold himself amenable to the code of ethics.

Dr. Gaillard said that Dr. Frazee had a right to read his paper, in accordance with a vote of the Society cast on the day previous.

The Chair so decided.

The House being appealed to, the decision of the Chair was sustained by a vote; and Dr. Frazee, after making a few remarks in defense of his professional standing, read his paper; which was referred to the Committee on Publication.

Owing to the want of time, it was decided to reconsider the vote to accept Dr. Griffiths' invitation to visit the United States Marine Hospital. Motion prevailed, and the Society decided by vote to meet again in the Masonic Hall at 3 P. M.

During the session the President introduced Dr: J. C. Ken-

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quiet this member, who seems to desire to tilt with every one; if it is not enough, the next shall go through. The physicians of Louisville are, very naturally, disgusted with the endless tirades in regard to what is termed their "quarrels." It is not impossible that they may need (as do all) kindly admonition; but they at least claim the right of receiving this from those whom they trust and respect.—Ed.

nedy as a delegate from the Ohio State Medical Society. Dr. Kennedy was invited to take his seat among the members.

The following gentlemen were proposed for membership: Drs. Samuel Garvin, W. F. Beard, Alexander Crawford, Watkins, C. H. Todd, G. T. Erwin, Ely McClellan, and James Lowry.

Their names were referred to the Committee on Credentials, who, reporting favorably, they were duly elected.

Dr. L. B. Todd, the Treasurer, made his annual report, which was received and referred to the Auditing Committee.

The report of the Recording Secretary, Dr. W. Rodman, was read, received, and filed.

Dr. Wise, the President of the Society, then delivered the annual address.

Note.—The following extract from this speech will show what is Dr. Wise's real opinion of the serious duty resting upon a Medical Society when charges are preferred against an offendiug member. It is difficut to understand how one could write such language and then act in a manner so entirely at variance with his own thoughts and the Constitution which it was his duty to protect.—Ed.

"The reputation of a practitioner in America really depends, not so much upon his diploma and the fame and character of those whose names are attached to it, as it does upon the personal character and professional life and deportment of the bearer of it; upon the means he adopts to win the praise and esteem of men, to secure the confidence and respect of his professional brethren. If we elevate, protect, and sustain the noble, learned, and true in our ranks, while we are swift to denounce the tricksters and charlatans who disgrace our profession, we will and can surely counteract much, if not all, of the defects in our American system of medical education.

"Medical societies and medical journals can always find in such work part of a great and fruitful mission. If they do publicly their duty, as we should do ours, the antidote will be sufficient to destroy the baleful effect of any poison.

"But if they are silent in regard to the protæan evils which

surround and endanger our ranks; if they be afraid to speak, and more afraid to act; if facile praise and indiscriminate eulogy usurp the chairs of active observation and impartial, but severe judgment, our peril is indeed great. Our medical societies and the medical press of America will, however, surely do their duty, and we will discover evil practices and evil men, only to rebuke the one and to punish the other."

Dr. L. P. Yandell, Sr., moved that the thanks of the Society be tendered to Dr. Wise for his excellent and learned address, and that it be referred to Committee on Publication. Carried.

On motion of Dr. L. P. Yandell, Sr., 4 o'clock P. M. was set aside for the reading of volunteer papers.

On motion, a committee was appointed to take into consideration the suggestions made in the President's address.

L. P. Yandell, Sr.,
Ed. Palmer,
C. W. Kelly,
} Committee.

Meeting adjourned.

Note.—The session of this morning presented one of the most lamentable pictures in the medical history of this State. The President of this Society, after listening to the preface to the charges made against Dr. Yandell, and then to the charges in detail, suddenly discovers that the proceedings are out of order; that they refer only to a local matter; brought though the charges were against the chief officer of the American Medical Association ramifying in its connections through every Medical Society in the whole country. When informed that the Constitution of the Society of which he was President required (as he did not know) that the members of this Society should be tried and punished by this Society, he did not, as all anticipated, reverse his ruling, on the plain basis that it was his solemn duty not only to abide by, but to defend the Constitution; but he still adhered to his unconstitutional decision, and the question was, by his direction, submitted to the House. The picture was already sufficiently lamentable; a President ignorant of the Constitution which he was to protect and maintain, instructed from the floor, and taught what was really the law which he assumed to administer; but the picture now becomes worse; he repudiates this law, sets it at defiance, and goes to the House to be sustained. The scene was already unfortunate enough, but now it culminated. Some asked to be excused, they would not support their Constitution, and they could not venture to risk themselves in the issue; some left the room without cause, some were "called away," they escaped the issue; some voted like men; some so managed as to be absent

during that morning. Now comes what most men could not have believed to be possible, the majority voted to repudiate the Constitution, as this vote alone could save the culprit from trial; the culprit himself voting to repudiate the law, rather than stand the fatal test!! The witnesses were on the floor; the charges made; the proofs all ready, but the accused is aided to escape by an open, reckless violation of the law which required him to be tried by the jury there assembled! And he escaped, but only like the law-breaker whose friends force the back-doors of a jail and help him to flee from a jurisdiction which they had aided in providing. In both of these cases the culprit escapes by similar agencies; the conscious and demonstrable violation of a Public Institution. In both cases, the guilty are rejoiced to escape; they connive at it, and aid in effecting it!! If there be a chapter more disreputable than this in medical legislation, where is it to be found? A physician charged with falsehoods; literary theft; personal, professional and official perfidy; obtaining means under false pretences; a confessed violator of the fundamental law of all medical societies; the case ready, the witnesses ready, and yet his friends, instead of forcing him to endure an investigation (which every one having in him the smallest element of manhood, would have promptly and persistently demanded) not only allow him to evade the trial, but violate the law in aiding him to escape.

Some may give the poor excuse, that the accused should be tried by the local Society, but the answer they know now, as they knew it when they voted; the Constitution of the State Society made the trial obligatory upon that Body; and it was besides openly stated before the vote that the local Society should not try the case.

There is no rhetorical effort in this statement; it is a plain presentation of historical facts. There is no elaboration of the picture; its outlines are too plain and undeniable to render this necessary. And what is the conclusion? Dr. David Yandell has been legally and publicly charged with acts which disgrace men; he has been surrounded with distinguished witnesses to prove the truth of the charges made; and when he had the opportunity of proving that the charges were untrue (as he had so often falsely declared them to be) like a guilty coward, moral as well as physical, he voted with his friends to evade the law demanding his trial; and so slinks contemptibly away. He was declared in June last to be a disgrace to his Profession. Here is the latest record. Is the declaration just, sustained, and true?—Ed.

Afternoon Session.

The report on finance was read and referred to Committee on Publication.

The following committees were appointed for the ensuing year:

STANDING COMMITTEES.

Vital Statistics, D. T. Smith.
Obstetrics, Dr. McClellan.
Epidemics, R. A. Gibney.
Surgery, Dr. J. W. Thompson.
Botany, Lewis Kastenbine.
Finance, Joseph Smith.
Ethics, J. M. Keller.
Hygiene, R. H. Thompson.

SPECIAL COMMITTEES.

On Arrangements, Dr. J. W. Thompson.

On Recent Improvements in Ophthalmic Surgery, Dr. D. S. Reynolds.

On Insanity and Diseases of the Nervous System, Dr. H. F. Barnes.

On Medical Electricity, Dr. J. W. Holland.

On Registration, Dr. Foss, Jefferson; Dr. Beeler, Hickman; Dr. Perkins, Somerset.

The Therapeutic Uses and Properties of Oxygen Gas, Dr. Frank C. Wilson, Louisville.

Laryngoscope, Dr. S. H. Garvin.

Fistula in Ano, Dr. R. O. Cowling.

Dermatology, Dr. L. P. Yandell, Jr.

Gynæcology, Dr. L. Hall.

General Pathology, Dr. E. S. Gaillard.

Defects in our Present System of Medical Instruction, and some Suggestions as to Remedying them, Dr. C. H. Spillman.

Hypodermic Medication, Dr. W. A. Atchison.

Post-partum Hæmorrhage, Dr. William Bailey.

Hydrophobia, Dr. W. W. Martin.

New Remedies, Dr. Coleman Rogers.

On Ovariotomy, Dr. Burdett.

Resolutions were passed in respect to the memory of Drs. Bradford and Rodman, and a committee appointed to prepare biographical notices of the honored dead.

Dr. L. P. Yandell, Jr., reported details of several peculiar diseases of the skin.

Dr. Chipley offered the following:

Resolved, That Art. VI. of the Constitution be amended by the addition of section 2—viz., that this Society will entertain no charge against any member except on appeal from the action of some local organization.

Dr. Clemens read a paper on his improved brace for fracture.

The following physicians were elected honorary members of the Society: J. J. Woodward, of Washington City; E. Williams, Cincinnati; William Carter, Cincinnati.

The election of delegates to the National Medical Convention being next in order, it was moved that the Chair appoint delegates who would go.

Several members stated that Kentucky was rarely represented as she should be.

The matter was then left to the discretion of the Chair.

Dr. Speed then read a paper on Tubercular Phthisis.

Dr. D. Yandell read a paper on Epilepsy.

Papers from Drs. D. Smith and C. T. Uhlrich were, with all of the papers previously read, referred to the Publishing Committee.

The usual vote of thanks of the officers of the Society (to Dr. Uhlrich specially, he doing the arduous work of Secretary pro tempore by request) to the physicians of Louisville, the railroad companies, and others, etc., etc., was passed; and the Society adjourned to meet in Paducah, Ky., on the second Tuesday in April, 1873.

"THE BANQUET."

A very creditable supper was given by the physicians of Louisville to their medical guests. There were, of course, many invited also from the various literary, professional and cultivated circles of the city. The entertainment was, as a whole, pleasant; and was enlivened, as usual, by those elements which contribute so much to liveliness on such occasions. The

olive branch, the laurel, and the cypress, were variously represented. Of course, after wine come the olives; and this magic berry naturally indeed suggests the affecting language of the branch which has produced it. The laurel was voted in silent spirit to the cooks or the speakers, as gastric or mental emotion touched the nature of the different guests. The cypress was waved in warning, and brought, as did the mystic writing in the banquet hall of the Chaldean King, consternation to guilty spirits. Dr. Keller had been asked to respond to the sentiment—"The Code of Ethics." Contrary to expectation, the scene of "the charges" in the morning could not be forgotten; joy had given place in his heart to sorrow; panegyric, now a mockery, was set aside for the language of sadness and disappointment; customary eulogy was impossible; the pride of the Profession had been destroyed; he stood over its grave, and all that remained, was to offer the cypress wreath in its memory.

It may well be understood that the effort of an invited guest (not a physician) to ridicule this code, at the table, was not such a success as to flatter even the obtusest vanity. The satire, or wit, or humor, attempted by the speaker, was to term this code "the code of essex." This was the force of the blow. As poor Poe once wrote, "Only this, and nothing more." The effect was not great. It was indeed about as effective as an effort to sink a monitor with a pop-gun. A failure in taste, conception and execution. But censure yields to charity, and should yield, when one comments upon a festival terminating so happily; the olive branch aloft in the "last scene of all which closes this eventful history."

Boyle County Medical Society.

At a meeting of the Boyle County Medical Society, held Tuesday, April 9th, 1872, the following preamble and resolutions were introduced and adopted unanimously:

Whereas, God, the Supreme Dispenser of life and death, hath called away from his sphere of action here, a member of

this Society, Dr. William Pawling, who, from his long and useful professional life, his earnest coöperation in the founding of this Society, and his untiring labors for its advancement and perpetuity, his high-toned ethical bearing among his fellows, his extensive and successful practical knowledge and skill, and in his quiet, uncomplaining, indeed, cheerful Christian fortitude, as 'neath the weight of years he toiled on his professional rounds to the end, hath left us much in his example for imitation; therefore, be it

Resolved, That in the death of our confrere, who, for more than a half century, steadily marched in the ranks of our profession battling with disease, and has now fallen at more than three score and ten, with armor still on, this Society has met with a profound loss.

Resolved, That while we bow in submission to the Sovereign will, we will ever cherish with lively interest the memory of our deceased brother, and deeply sympathize with his family in this their irreparable loss.

Resolved, That these resolutions be spread upon the minutes of this Society, and published in the "Kentucky Advocate" and the medical journals of the State, and a copy sent to the family of the deceased.

JOHN D. JACKSON,
A. R. McKEE,
R. W. DUNLAP,
} Committee.

GEO. T. ERWIN, *Sec. B. C. M. S.*

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

VIENNA, AUSTRIA, March, 1872.

A few days since a patient suffering from constipation of ten days' duration, and stercoraceous vomiting, was received into the medical wards of Professor Schroetter. The absence of hernia was determined, after a most careful examination, and in the absence of other indications, it was decided that the patient was suffering from an internal incarceration of the intes-

tine. All remedies indicated in this condition were applied, without avail, nor did the introduction of the long elastic tube, through the rectum, into the colon afford any relief.

Professor S. then decided that it was only possible to save the patient by resorting to operative procedures, and for this purpose he called in the assistance of Professors Dumreicher and Dittel. After consultation, an operation was agreed upon, which was carried out as follows:

An incision two inches in length was made in the linea alba, extending from the lower portion of the ensiform process of the sternum to near the umbilicus, and the peritoneum opened. A discolored and very œdematous piece of intestine forced itself into the opening, and was recognized as being a portion of the transverse colon. On the left of this a bright red portion of the descending colon was also visible.

The great difficulty experienced in finding the point of incarceration could only be removed by increasing the length of the incision and opening the enormously distended intestine, and thus allowing the collected gases to escape. After this was done, and the discolored portion of intestine was withdrawn from the abdominal cavity, the point of torsion and strangulation became visible. This portion of the colon was removed, the two ends of the intestine united by sutures, and the abdominal wound was also closed by means of sutures and plaster. The patient lived for twenty-four hours after the operation, and then died from shock.

The post-mortem appearances were as follows: The incarcerated portion of intestine had assumed the shape of a Roman S, which had made half a turn on its axis, and was dislocated to the right and above. The entire mass of small intestine and omentum was found lying upon the colon, so that the strangulation was partly caused by the twisting on its axis, and partly by the weight resting upon this part of the intestine.

Professor Dumreicher remarked that the colon had first made two turns upon its axis, and previous to reposition it had partially uncoiled itself, so that, at the post-mortem, only half a

turn was visible. He also stated that he always hesitates to resort to operative procedures in ileus, owing to the great difficulties encountered in finding the point of strangulation. In some cases, however, the operation is imperatively necessary, and in case the incarceration is not of too long standing, and the diagnosis is correct, recovery may be looked for.

In the above case but little benefit was to be expected from the operation, as strangulation had already existed for twelve days before relief was attempted.

A very rare affection, *i. e.*, a case of echinococcus in the orbit, was recently presented at the Clinique of Professor Billroth. The patient, a boy aged 13 years, gave the following history: He stated that he has suffered for the past two years from a tumor which first made its appearance at the lower and outer border of the orbit of the left eye; this gradually enlarged to such an extent that the bulb of the eye was pushed upwards and inwards to such a degree that but a small arc of the cornea was visible below the edge of the upper eyelid. The patient suffers from headache, and has had acute attacks of supra-orbital neuralgia.

On examination, it was found that the tumor afforded an elastic and somewhat fluctuating sensation to the touch; there were no symptoms which would lead one to think that this was an abscess, as no signs of present or past inflammatory action were found. It was suggested that the swelling might be an angioma, but an explorative puncture being made into the cyst, a clear fluid exuded from the mass, which left no sediment, thus forcing one to the conclusion that it must be a simple serous cyst. The reäction following the operation was considerable. The tumor increased in size to a marked extent, and as it was found that pus might gather and serious results ensue, a radical operation was determined upon. An incision was made at the lower and outer edge of the orbit, the scalpel was pushed forward into the cyst, which was situated between the orbital periosteum and the layer of connective tissue surrounding the muscles of the eye. The tumor was opened, and soon after an

echinococcus cyst, the size of a hazelnut, made its appearance and was withdrawn from the opening.

The ophthalmoscopic examinations made previous to and three days after the operation, afforded the following results: At the first examination the retina was found to be quite anæmic, the arteries contracted in volume, while the veins were varicose; the papilla was very pale, and to a slight extent concave. This condition was probably due to the excessive traction on the optic nerve, which also prevented the proper circulation of the blood. At the second examination, the retina and its vessels, as well as the papilla, had again assumed their normal appearance, and the patient was able to see without difficulty.

This is a very rare form of disease. I have only been able to find five cases of enchinococcus in the orbit recorded, while the number of instances in which this entozoon has been found in the liver is almost innumerable.

Dr. F. W. Heffer has just recommended a new method of treatment in diphtheritis, *i. e.*, the application of carbolic acid. The Doctor gives the history of two cases of this disease which had already been given up for lost before they came under his care. He employed a solution of the strength of $\frac{1}{2}$ per cent. as a gargle and as injection, to be applied every half hour, and another solution of the strength of 2 per cent. for inhalation every 2 or 3 hours. In both cases the exudation was soon thrown off, and recovery set in. Sixteen cases, the most of them of a severe nature, have been treated by Dr. H. according to this method. Among these only two ended fatally; the first, a child of six months, in which the solution could not be applied; and the second, a boy 4 years of age, who died from collapse, which set in after the exudative material had been removed, and the ulcers remaining had already been healed.

According to this statement, 14 cases, or 87.5 per cent. of the number treated recovered their health; nor were they afflicted by any of the sequelæ which generally follow in the wake of diphtheria.

The marked success which Professor Zeissl, the Chief Physician of the Second Division for Syphilitics in the Vienna General Hospital, has achieved in the treatment of acute and subacute inguinal and femoral buboes, induces me to give you a brief sketch of the method employed by him.

He says that for the past twenty years he has been searching for a satisfactory method of treatment. The only method which had ever answered his expectations was the application of a solution of the acetate of lead to the affected glands. With this remedy he has achieved excellent results in his private practice, and has patiently waited for an opportunity to apply it on a larger scale.

About three years ago Professor Z. was placed in charge of his present Division, which, owing to its proximity to the dead-house and pathological laboratory, has always been known for its insalubrity. This unsatisfactory condition soon manifested itself in the evil effect which it had upon suppurating buboes, often causing them to gangrenesce (?) in the most frightful manner. After applying every possible means to improve the sanitary condition of the wards, and to counteract the evil influence exerted by the unwholesome atmosphere, Professor Z. determined to apply the lead treatment, which had already given such excellent results. At the same time he determined only to open the buboes when imperatively demanded.

This treatment, by means of the acetate of lead, has now been carried on in the following manner for the last two years: If after the first examination, it may be hoped that the integument, covering the glandular enlargement, can be saved, it is thoroughly washed and cleansed of all foreign matter adhering to it. The patient is put to bed, and a compress, soaked in a solution of the acetate of lead is applied to the swelling. The compress is moistened from time to time, so that the buboe is always bathed with the solution. After three or four days, the skin covering the swelling is already considerably thickened and toughened. If any fluctuation be noticeable at the beginning of treatment, we will generally find that it gradually dis-

appears, and that the swelling acquires a doughy consistency. Should the pus increase in quantity, a vertical incision, with a bistoury, is made into the mass, care being taken that the wound be not too large, as it is desirable that the contained matter should escape but slowly. This evacuation is promoted by the application of the moist compress, which is held in apposition with the diseased parts by means of a spica bandage. In the course of a few days, we find that the contents exuding from the abscess have changed from a creamy purulent to a serous, lymph-like fluid. The effect of the lead treatment appears to be this; that the purulent contents of the swelling are disintegrated into serum and pus globules. Drainage tubes should never be introduced into the abscess, as they retard recovery, because the continuous irritation exerted by them causes the integument to degenerate, and thus give an open wound.

If the case be a multiple buboe which has already opened at several points, the following ointment of iodide of lead will afford speedier relief than the sugar of lead compress:

℞.—Plumbi Iodati, ʒ i.;
Ext. Belladonna, ϑ ij.;
Emplast Diacbyli, ʒ j.;
Unguent elemi q. s. to make a soft plaster.
S. Ointment.

In case the pus confined in the abscess be disposed to burrow between the neighboring tissues, a simple incision of the integument, etc., covering the fistula will suffice.

R. C. Brandeis, M. D.

Louisville, April, 1872.

Dr. E. S. Gaillard:

Dear Sir,—In the April number of your Journal is a short review of a pamphlet on ovariotomy by the late lamented J. Taylor Bradford, M. D., of Augusta, Ky.

It is my single purpose, in noticing this review, to correct a misstatement of the writer, doubtless unintentionally made.

After paying a just tribute of praise to Drs. Ephriam McDowell and J. Taylor Bradford for their achievements in ovariotomy, the reviewer remarks: "It is strange that McDowell and Bradford should have been such distinguished and successful operators, while all others who have really operated to any extent in this State should have met with such disastrous results."

The allusion here is to a previous remark of the reviewer: "Unfortunately, nearly all of the more recent results in connection with this operation in this State have been disastrous."

If by the term more recent results be meant those occurring within the last three or for years, especially in this city and vicinity, the remark is true, for the deaths from the operation have exceeded the recoveries in the proportion of nearly three to one.

But the declaration that all besides McDowell and Bradford, without limitation as to time, who have operated in this State, have met with such disastrous results, is not correct, provided it be admitted that one who has performed the operation six times, with the average success attending it, has *really* operated to *some extent.*

This is precisely my own predicament. I will briefly refer to these cases in the order of their succession.

My first case, and I believe the first one operated on in this city, was Mrs. McLaughlin, from Indiana; the operation was performed on the 6th of April, 1848, in the presence of Drs. S. D. Gross, G. W. Bayless, Thomas Colescott, W. B. Caldwell, and T. G. Richardson. It was a case of multilocular tumor of the right ovary. The tumor was extirpated, and the patient perfectly recovered, and lived several years afterwards in the enjoyment of good health. The case was first published in the "Western Journal of Medicine and Surgery."

Second case, Mrs. Ashby, from Ohio county, Ky.; found on examination to have multilocular tumor of the right ovary. I ovariotomized her on the 30th September, 1859, at St. Joseph's Infirmary, in the presence of Drs. Flint, Bayless, Bell, Rogers, Palmer, and Donne. The operation was successful; she recov-

ered in a month, at the expiration of which her husband took her home, and she bore him a child in nine months afterwards.

Upwards of ten years intervened between my first and second cases, and during this period ovariotomy was performed only once in this city, and then by Professor S. D. Gross, at that time my colleague in the Medical Department of the University. Prof. Gross's operation has been recorded by him in his "Report on Kentucky Surgery," made to the State Medical Society at its annual meeting in Louisville in 1852. The patient was a young woman with a large multilocular tumor of the ovary, which was extirpated. The incision healed by the first intention, and everything was promising; but the patient shortly afterwards was seized with a severe chill, attended with great prostration, and she died nearly a month after the operation.

I drew up a report of my second case, and embodied it, together with my first case, which had been published in the "Western Journal of Medicine and Surgery," in an essay on Encysted Tumor of the Ovary, which was published in the "American Journal of the Medical Sciences" for April, 1859.

My third case was that of Mrs. Talbot, of Boyle county, who had a large multilocular tumor of the left ovary. Operated upon her 18th October, 1860, in the presence of Drs. M. Goldsmith, G. W. Bayless, John Hardin, John Goodman, and S. Brandeis. The tumor was extirpated, and she recovered without any serious trouble, and is living at this present writing.

My fourth case, Mrs. Anderson, of Rutherford county, Tenn., a spare, delicate lady, laboring under chronic bronchitis, had multilocular tumor of left ovary—detained her here for some time to improve her general health.

On the 10th of May, 1865, the operation was performed in the presence of Drs. Ireland, Bayless, Goodman, and Perkins, and the tumor extracted and clamp applied to pedicle. Agonizing pain continued despite of large doses of morphia; and she died in twelve or fifteen hours after the operation.

My fifth case, Mrs. Brown of Ohio, two large cystic tumors

of the ovary. Operation the 30th of October, 1866, in the presence of Drs. M. Goldsmith, W. B. Caldwell, John Goodman, and E. Miller. It was found that the cysts were so closely adherent to the uterus and bladder that it was not possible to separate them. The cysts were incised, the fluid evacuated, and the wound closed by sutures. After a hard struggle against copious, offensive discharges from the wound, of several months' duration, she recovered.

Sixth case, Mrs. James, a widow lady from Henderson county, Ky., had multilocular tumor of the left ovary, complicated with chronic bronchitis, loss of appetite, and rejection of nearly all the food she had taken. Operated on her, under protest, on the 21st of April, 1868, in the presence of Drs. Powell, Bayless, Satterwhite, and Goodman. The tumor was extirpated, but the patient died on the third day after the operation.

My last four cases were published in the April number for 1869 of the "American Journal of the Medical Sciences." In all my cases chloroform was administered; and I cannot think that the question which has been raised in regard to the propriety or safety of its administration is worthy of serious consideration.

It will be observed that of my *six* patients subjected to ovariotomy, *four*, or 66 per cent. recovered, a degree of success slightly superior to that exhibited by a collection of the statistics of ovariotomy reported by Dr. Bradford for the State of Kentucky, and considerably superior to the statistics of the operation for the State of Ohio, reported by Dr. Hamilton in the "Ohio Medical and Surgical Journal" for November, 1859. The Kentucky operations yielded 63 per cent. of recoveries; the Ohio 53 per cent. If we look into the statistics of a larger number of operations by surgeons in all parts of the world, such as John Clay, of Birmingham, Eng., has prepared and appended to his translation of Kiwisch on the Ovaries, we shall find the percentage of recoveries reduced still lower. Thus, for example, of 395 cases of complete ovariotomy 212 or only 53 per cent. recovered.

And I may add that Mr. Spencer Wells's success, at least in the 114 cases recorded in the first volume of his work on "Diseases of the Ovaries," does not surpass my own. Of these 75 recovered, or 65 per cent.

The reviewer marvels that Drs. Bradford and McDowell should have been such successful operators, while others in this State have so signally failed. He is probably under the erroneous impression, shared by many, that the originator of ovariotomy operated in numerous cases, and with almost uniform success. This, however, is not the fact. Dr. McDowell reported only *five* cases of ovariotomy, which were published in the seventh and ninth volumes of the "Philadelphia Eclectic Repertory," and Dr. S. D. Gross, in making up his Report on Kentucky Surgery, read before the Kentucky State Medical Society at its meeting in Louisville in 1852, communicated the particulars of *three* more cases, which were collected by a searching correspondence. The result was, that one of the cases published by Dr. McDowell himself proved fatal; in another the operation was not completed on account of adhesions, and the tumor was simply incised and the fluid evacuated. The tumor returned and regained its former size. Of the three cases collected by Dr. Gross, in only one of them was the operation completed by the extirpation of the tumor; in the remaining two the tumor could not be extracted on account of adhesions, indeed, in one of them, that of Mrs. Overton, near Nashville, the cyst containing the fluid was opened by the incision dividing the peritoneum, and "there gushed out, in a full stream, a bloody-looking serum, which continued to flow till the sac which had contained it was entirely empty."

It appears, then, that Dr. McDowell lost one of the five cases published by himself, and failed to complete the operation in another; and that in two of the cases collected by Dr. Gross the operation was incomplete. The object of the operation, namely, the removal of the diseased ovary, including all his cases, was achieved in only five cases, the precise number in which this object was accomplished in my own cases. Had Dr.

McDowell no other claim to distinction among surgeons than the number and success of his ovariotomy operations, his name would soon have been forgotten. His true passport to immortal fame is, the origination of the operation itself and the demonstration of its practicability. Truly yours,

H. Miller.

Reminiscences of Recent Travels in Europe.

Louisville, Ky., April 12, 1872.

Dr. Gaillard:

In passing through the great cities of Europe, one sees so much of interest, apart from that which is connected with the medical profession, that unless he visits with the intention of writing an account of his travels, as a physician, and by inquiries acquires information upon points of interest, and at the time notes down what he sees and hears, he is apt to pass casually over a great deal that would be invaluable to him in that connection, or to forget much of the detail, without which it is almost impossible to proceed. Thus I find myself six weeks after my return from a short visit to the three great medical centres of Great Britain—viz., London, Edinburgh, and Dublin, and in attempting to give (at the solicitation of some of my friends) an account of what I saw of medical men and hospitals while there, I can but feel my inability to do justice to either the subject or myself.

With the above apology for the cursory manner in which I shall proceed, I will commence with my visit to Dublin, where, although my stay was of short duration, I saw so much to please and interest me, that I, for time to come, will often with pleasure go back in memory to the days spent in the Irish capital. Among the first to bid me welcome to the Emerald Isle, was Dr. Mapother, and he did it in the true and generous style so characteristic of the gentlemen of that country. After a pleasant little chat, during which he made many inquiries after the physicians of Louisville whom he had met in his recent visit to our city, he invited me to accompany him to St. Vin-

cent Infirmary, a general hospital of one hundred beds, under the management of the Sisters of Charity. There I saw a number of interesting cases, principally deformities in children, for the use of which class of patients a large ward has been recently opened. In the treatment of some cases of club-foot, Dr. M. was putting into practice suggestions made to him by our well-known countryman, Dr. Lewis Sayre, of New York. The neatness and order that prevailed in this institution is remarkable; the waxed and polished floors, the clean and tidy beds, and the pure air in the wards, gave evidence of more care and judgment being exercised there than is generally in such places. From the Infirmary a short walk through a pleasant part of the city brought us to the Royal College of Surgeons, where, besides capacious lecture-rooms and well-fitted and comfortable apartments for dissecting, I saw a fine library and medical museum filled with well-preserved pathological and anatomical specimens; some of them of great value on account of their rarity and beauty. This College grants two diplomas, one conferring the rank of Fellow, and the other that of Licentiate. With the exception of the right to vote for or fill the office of president, vice-president, and counsellor, a Licentiate has all the privileges of a Fellow, and both are obliged to make a formal declaration that they will obey the laws governing the College, and do all in their power to maintain its honor and dignity; besides, they must declare that they will in no way be engaged in the business of an apothecary or in the sale of drugs and medicines. The professors of this institution are men not only noted at home for their ability and skill as teachers in their respective departments, but by their writings are known to the whole medical world. Dr. Mapother, who fills the chair of Physiology, is the youngest of the Faculty, and has the reputation of being a hard student and full of energy; as a teacher he is thorough, and lectures in a pleasant and dignified manner, impressing his hearers by the earnestness and zeal that he manifests. He has filled several places of distinction—among them that of Health

Officer of the city of Dublin, in which capacity he gained golden laurels. Among the most noted of his writings, are Lectures on Public Health, An Essay on Hip-Joint, Treatment of Aneurism by Distal and Proximal Pressure under Chloroform, and Treatment of Rheumatism by Chlorate of Potash and by Blisters.

I next called on Dr. Churchill, of obstetric fame, whom I found to be an exceedingly pleasant, little, old, gray-haired gentleman, with a face so beaming with goodness and sympathy as to make one like him, even if he were inclined to do otherwise. On presenting him with a pamphlet (Retrospect of Uterine Pathology in the United States) from Dr. Henry Miller, of our city, he seemed much gratified, and, in the conversation that followed, paid the Doctor, whom he seemed to be well acquainted with, through his writings, many handsome compliments. He also dwelt upon the importance of having a good light in examinations of the vagina and uterus, saying that he believed the want of which, in London, was the cause of a difference of opinion, in some instances, between the physicians of that city and those elsewhere; their dim, dingy light being insufficient to see fully the condition of the parts in some cases. Dr. Churchill is apparently between sixty-five and seventy years of age, and is yet quite active, and attends to a large practice. At the present time he is not engaged in teaching, having given up his professorship some years ago. As an author, his valuable works and contributions are so familiar to all as to make further notice of them unnecessary.

Dr. Alfred H. McClintock I found to be about in the prime of life, with a strong and active mind, and as pleasant and convivial, as he is intelligent; he impressed me as one who is not afraid to think for himself, and to speak his opinions boldly, as one who, by research and observation, will find out new and better ways in preference to trudging along over the old and worn paths through which his predecessors have gone. In speaking of the obstetricians and gynæcologists of America, he was lavish in his praise where he thought it was merited, and

equally outspoken in his disapproval of what he considered wrong. He esteemed highly the writings of Dr. J. Marion Sims, with the exception of his pamphlet on the "Diagnosis and Treatment of Sterility," which he regarded as little better than absurd. He also, in his plain, candid manner, expressed himself adverse to Thomas's Operation as a Substitute for Amputation in Chronic Inversion of the Uterus. So much pleased was I with his quick perception and cogent reasoning, that I thought I had seen but few men in the Medical Profession that would class with him. At 9 o'clock on the following morning, according to engagement, Dr. McClintock called for me at my hotel, and took me to the Rotunda Lying-in Hospital. This institution was established in 1745 by Dr. Bartholomew Mosse, who seeing the necessity of an asylum of this kind for the poor lying-in women of Dublin, set his energies to work to accomplish the purpose. After several years of incessant toil, during which he expended all of his means, he saw the present building finished, but worn out by the labors and anxieties necessitated by the undertaking, he lived but a few months after its completion. "The Hospital contains 130 beds, the annual average number of in-patients is 2,000; out 2,500." The wards are clean and well ventilated, the amount of space allotted to each individual being at least 2,000 cubic feet. As a school of midwifery, it is the oldest and largest in the kingdom. Among its late masters, men with whom we are all familiar by their writings, are Kennedy, Johnston, Skelton, McClintock, and Denham. The present master, Dr. Johnston, I found to be a polite and clever gentleman; besides showing me through the establishment and explaining its workings, he presented me with several pamphlets and statistical tables relating to the hospital, from which I extract the following figures:

Number of deliveries in hospital up to January 1, 1870, 192,-201.

Proportion of males and females born, about 12 males to 11 females.

Proportion of children dying in hospital, about 1 to 28.

Proportion of children still-born, about 1 to 18.

Proportion of women having twins and more, about 1 to 62.

Proportion of women dying in child-bed, about 1 to 80.

Proportion of women having three or four children, about 1 to 4,500.

Besides the great benefit as a charity, it presents a vast field for observation to the student, and has probably done as much as any other Institution in the world to progress our knowledge in this department of medical science.

S. H. Garvin, M. D.

Louisville, April 11, 1872.

Prof. E. S. Gaillard M. D.:

Dear Sir,—In regard to the action of amyl nitrite in tetanus, as produced by the toxical effects of strychnia, I will give you the results of my experiments, which are as follows: 1st. A large, healthy dog was given about one-fourth of a grain of strychnia sulphas; after the animal was under its influence and the muscles became rigid, he was forced to inhale a few drops of amyl nitrite, which produced complete muscular relaxation in two or three minutes. Ammonia was then applied to the nostrils, which revived him somewhat, and in about six hours the animal had recovered completely.

2d. The same animal, after he had completely recovered, was given one grain of strychnia sulphas in solution; muscular rigidity came on almost instantaneously; he was immediately forced to inhale some amyl nitrite, which produced complete relaxation of his muscular system in about two minutes.

The animal died from the effects of the second dose of strychnia sulphas, but his muscular system remained perfectly relaxed, and even after death there was not the slightest rigidity to be discovered.

Respectfully,

C. J. Rademaker, M. D.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

NEURALGIA AND THE DISEASES THAT RESEMBLE IT. By FRANCIS ANSTIE, M. D. (London). New York: D. Appleton & Co. 1872.

All works from the pen of Dr. Anstie attract deserved attention. The reasons for this are simple, but strong. He is scientific and thorough; original and honest; analytical and concise; forcible and usually correct; with a style simple, easy and perspicuous. These are strong characteristics in a writer and practitioner. It is a cause of no surprise, therefore, that Dr. Anstie is not only successful, but popular as an author.

This is the first edition of this work. He was induced to write it, it seems, from the difficulties so constantly presented in his attempts at diagnosticating this and kindred diseases; and from the unsatisfactory results obtained by him in accepting the views and adopting the practice suggested by others. He believes that, as the result of his studies, he has learned much, and he publishes views that he claims to be original; there is an entire and distinct repudiation of the position of the mere compiler. Those who have read Reynolds's System of Medicine, will remember that Dr. Anstie contributed a valuable article on the subject of Neuralgia. Much that is to be found in his present volume on neuralgia was foreshadowed in the work mentioned; but it is fair to say that the views originally presented have been materially amplified, changed, and elaborated. Dr. Anstie, in his present volume, claims for neuralgia a distinct and independent position; that it is not, as he says, a mere offshoot of the gouty or rheumatic diatheses. There is to be seen in this volume some really artistic conceptions and masterly presentations.

Frequenters of classic galleries of paintings are aware of the ingenious device of showing original paintings to the best ad-

vantage by surrounding them with mere imitations. Dr. Anstie has grasped this artistic device, and illustrated it very happily in his work. Thus, after giving the history of his subject, he presents it in its minutest details, making his picture a model of care, accuracy, harmony, masterly groupings, and final elaboration. This done, he hangs it up figuratively, as did the old Grecian masters, for criticism and comment. Improving, however, upon the old Grecian custom, he executes counterfeit presentments of his ideal, and presents these also, to give to the original its most complete triumph; to enable the beholder to learn, at a glance, the difference between the subject of original study and the subordinate subjects which are so often mistaken for the true and perfect picture.

To abandon, however, this figurative description of the triumph and labors of this artist, it may be briefly, and perhaps more plainly, said that he presents in the first part of his volume the clinical history of neuralgia; its complications; its physiology and etiology; its diagnosis and prognosis, and then its treatment. This done, he gives to the reader brief but accurate pictures of those marked conditions with which neuralgia is so often confounded; these counterfeits of neuralgia are myalgia; spinal irritation; the pains of hypochondriasis; the pains of locomotor ataxy; the pains of cerebral abscess; the pains of alcoholism; of syphilis; subacute and chronic rheumatism; latent gout; peripheral irritation; colic; dyspeptic headache, etc. These pictures are brief and masterly.

Nothing surprises one more than that these complex and perplexing subjects should be presented, and presented well, in 350 ordinary octavo pages. There is no risk in saying that this volume will soon be found in almost every well-assorted medical library. It is, as is usual with the Appletons, beautifully printed and issued. The work is unqualifiedly commended.

PLAIN TALK ABOUT INSANITY—ITS CAUSES, FORMS, SYMPTOMS, and the Treatment of Mental Diseases, with Remarks on Hospitals and Asylums and the Medico-Legal Aspect of Insanity. By F. W. FISHER, M. D., late of the Boston Hospital for the Insane. Boston: Alexander Moore. 1872.

The title for this work is so voluminous that description is almost unnecessary; but however long the title, the analysis of these multiform subjects is quite brief; the book is an octavo (royal) of only 96 pages. The author has endeavored to adapt it to the demands of both the secular and professional reader, and like all who have, before him, made this attempt, he has made a comparative failure. No one can in the same volume offer that gossippy, superficial style which the unprofessional reader seeks, and at the same time give that thorough exposition of a subject which the scientific student, or even the scientist, so absolutely demands.

It must, in fairness however, be said, that Dr. Fisher has done better than many who have essayed this almost impossible work. There is much in his volume of positive value to the medical man. He gives briefly much important information in regard to the subjects presented, which one could not well obtain, without a careful study of such elaborate treatises as those of Ray and Beck and Stillé and Winslow and Griesinger and Esquirol and others. All welcome *multum in parvo*, but the experienced know that in science this desideratum is almost an impossibility. What, then, is to be said of this work? To the unprofessional it will be of much value; to the medical man who desires to be thorough (and will be so) it is practically little more than a welcome trifle; to the medical man who has not time for study, and who wishes to have only a general conception of the subjects mentioned, it will be found entertaining and instructive. Some very suggestive and useful cranial measurements are given, contrasting the diameters of the sane and insane, and prefixed to the text are some very useful diagrams, illustrative of these differences. The author gives that very useful classification of the protæan forms of insanity which

was first presented by Dr. Skae in the "Edinburgh Medical Journal" for November 1870. This classification has, of course, its defects; but who has presented a classification not justly subject to the same criticism? After all that may be written, nothing will give the reader a better idea of the general scope and character of Dr. Fisher's work than this brief presentation of the subjects discussed; causes of insanity; forms; symptoms; partial insanity; monomania; medical treatment; moral management; home treatment; hospital treatment; hospitals and asylums; medico-legal aspects of insanity, etc.

On the Treatment of Pulmonary Consumption by Hygiene, Climate and Medicine. By James Henry Bennett, M. D., London. Second Edition. New York: D. Appleton & Co. 1872.

The Profession are so familiar with the first edition of this excellent monograph that it is unnecessary to do much more than call their attention to the second edition of it. Its distinguished author has written so often and so well on these subjects, and is in his own person so familiar with their gravity and importance that his views are more than usually valuable; they come to the professional world now as the result of the combined strength of scientific research and personal experience on the part of the writer.

After mentioning the many views in regard to the pathology of pulmonary consumption, he limits his studies practically to the antagonistic and familiar views held on the one hand by Dr. Virchow, and on the other by Professor Bennett, of Edinburgh. As is well known, the views of Virchow and his followers are briefly, that pulmonary phthisis is either the result of a new growth, or, as Niemeyer would especially teach, that it is a form of disease induced by the caseous deposits of acute or subacute pneumonia; Bennett, of Edinburgh, on the contrary, still claiming a tubercular origin for the disease, and that the tubercles are the result of exudation occurring in those whose blood is peculiarly impoverished by hereditary or extra uterine causes.

One may very properly criticise severely this absolute limitation of Dr. James Henry Bennett, in his exposition of tubercular consumption at the present day, and show that it argues either a strange ignorance on his part of the wonderful studies (in connection with tubercle) that have been prosecuted and presented in recent years, or a determination to repudiate all of these brilliant investigations, and give the laurels of enduring distinction only to Virchow and the distinguished professor at Edinburgh. Dr. J. H. Bennett entirely ignores the impressive researches of Sanderson, Fox, and others of the British School. He expresses no opinion as to whether the tubercle artificially induced by traumatic irritation differs in histology or pathology from the tubercle deposited as the result of a tubercular diathesis; whether the hyperplastic bodies (tubercles manifested in the lymphatic distribution, as the result of traumatic irritation) be similar or dissimilar to those heteroplastic bodies which are formed independently of all artificial or voluntarily instituted agencies. This one of the most important phases of investigation at the present time, Dr. Bennett either repudiates or evades. He makes no defense, no vindication of the obsolete exudation views of Prof. Bennett, of Edinburgh, but accepts them in entirety, without question, without declared reason, and with all the cogent objections that have been urged against them, unanswered. While, without well-defended reason, he thus accepts the teachings of the Edinburgh clinician and pathologist, he equally strangely repudiates *en masse* the teachings of Virchow, Niemeyer, and many of the modern histologists, practitioners, and pathologists. Of course, every writer has a right to present his subject in his own way, but it is impossible to withhold some censure, at least, when an author so cultivated, so scientific, with so much experience at the bedside and in his own person, offers a work on pulmonary consumption at the present time to the professional public, and while repudiating so much that is really valuable in modern tubercular investigation, condemns, without any published reasons, the teachings of distinguished pathologists; accepting

also, without published reasons, the doctrines of a single (though distinguished) teacher. Where so distinguished a writer had studied so much of tubercle, had seen so much of it, and in his own person had felt so much, the medical public, it would seem, had the right to expect at least a masterly analysis of tubercular pathology, with a logical defense of such deductions as his observations and labors had suggested.

Apart from these objections, the work is one of extreme interest, as may be inferred from his analysis of the following subjects: Bodily hygiene; stimulants; respiration; ventilation; the skin; exercise; mental hygiene; the passions; climate and medical doctrines; warm climates, temperate, cold, summer and winter; Madeira, the Riviera and Spain; British winter climates; the medical treatment of phthisis; no antidote; the treatment of complications; cod-liver oil, iodine, iron, phosphorus, opiates, expectorants; the results of treatment; prognosis; types; histological theories; acute phthisis, general, chronic, complicated, scrofulous, senile, gouty; phthisis among the rich and poor; cases illustrative of the cure and arrest of phthisis; what are consumptives to do in life? can they marry? etc., etc.

It will be seen that the author ranges through a wide, interesting and fruitful field. The reader journeys most pleasantly apace with him, as now in sunny mood his great guide dwells upon the beautiful, the wonderful, the sublime which absorb him, or, depressed and in gloom, he points out the ruin, the premature blight, the decay and death which mark the varied scenes of a field so familiar and so interesting to him.

Perhaps one of the most interesting parts of this book is that wherein are given cases illustrative of the cure and arrest of phthisis. With the characteristic buoyancy and hope of one himself a sufferer, he dwells with special pleasure upon this portion of his subject. Among many cases given, no one is more interesting than that of the great Pinel. At twenty-five he was regarded so absolutely consumptive that he was compelled to abandon his work and go to Montpelier. Fortunate in the treatment prescribed, he returned, worked hard, made

three fortunes and lost them, and died fifty years after he was first seized with the disease. At his request his friends, M. M. Gendrin and Serres, made a post-mortem examination, "and traces of cured and past phthisical disease were found in a most irrefragable manner fifty years after the cure." This portion of the work abounds in many cases illustrative of arrest of the disease and positive cure. One can well imagine how joyfully the author, himself consumptive, collected these many cases, as so many evidences for rational hope in regard to his own ultimate recovery. They certainly impress the reader pleasurably and forcibly.

All that is presented in regard to climate is interesting, instructive, and well prepared, and though the localities named have not, for the American reader, the interest inspired in the European student, still, with the laws of iso-thermalism and climate now so well understood, the American physican can, with very little trouble, find for every European climate an analogue in his own.

Medicinal and hygienic management are interestingly and familiarly discussed, and the reader will find in Dr. Bennett's analysis of these several subjects many lessons of great and practical value.

It would have been unjust to have dismissed this work with a less cursory notice. The Appletons have issued it well.

ANNUAL REPORT OF THE BOARD OF HEALTH TO THE GENERAL ASSEMBLY OF LOUISIANA—SESSION OF 1872.

This is one of the most interesting, instructive and efficient reports that have for many years been presented to the Medical Profession. It has been the result evidently of severe and honest labor, performed, in the main, by well-informed and competent men.

After a practical and theoretical study of the whole subject of quarantine, the Board of Health is "decidedly in favor of its continuance and thorough enforcement." Their reasons for

this are abundantly and satisfactorily set forth in various parts of the Report.

There were during the entire year, in New Orleans, but 18 cases of variola, with 2 deaths. During the year previous, there were of variola and varioloid together, about 5,000 cases, with 528 deaths. This great difference has been due to compulsory vaccination (as far as this was possible); gratuitous vaccination of the poor; prompt isolation of all cases of either variola or varioloid; the most thorough disinfection of all fomites; and the free and generous distribution of pure virus. So pure and excellent was the virus furnished, that "in the many thousand cases vaccinated by the public officers and by physicians in the city and country, no accident has occurred." It is rare indeed that one finds so irrefragable an argument for the power, safety and efficiency of vaccination.

Yellow fever appeared as early as July 30th. It lasted until December 18th, being most marked in the months of September, October, and November. There were 114 cases. The mortality was excessive; 55 deaths. The first cases were imported; the names of the vessels, with dates, being given. It seemed that the health officers, by sanitary agencies, were able to limit the disease to certain districts, and to exclude it entirely from others; some of those districts which escaped being, before cleansing and purifying, exactly those in which the disease would most naturally, from hygienic surroundings and population, have been expected. Such a record is indeed a powerful argument in favor of quarantine; in favor of the transmissibility of the disease; and an equally satisfactory argument against all that has been written and spoken against the local development of the disease. Those who are monomaniacal on the subject of the development of yellow fever by mud-puddles and decaying grass, etc., will derive no comfort in reading the record given in this Report.

One of the most interesting and startling facts stated is, that (apart from yellow fever) the mortality from malarial fevers in New Orleans, during the past three years, has been respectively

17.5, 22, and 34 deaths in every 10,000 of population, while in Louisville, Ky., the mortality from malarial diseases, during the same period, has been "about 1.9 per 10,000 of population." These facts are given in this report. In New Orleans, during the past year, the mortality in yellow fever cases (during a period extending from July to December) was nearly 50 per cent.; and the mortality in malarial fevers "34 in 10,000 of population." In Louisville, yellow fever is not seen, and the mortality from malarial fevers has, during the past year, been "about 1.9 in 10,000 of her population." Is it not strange that, with such facts and figures, there are men (and these physicians) who can stultify themselves, by dishonest and silly complaints, when the statement is publicly and properly made that Louisville offers, in salubrity, an almost unrivaled climate, as an educational and business centre? Her unhappy sister cities of the Gulf are struggling, and must continue to struggle, with climatic diseases which they are powerless to eliminate and prevent; and which are especially deadly to those who, unacclimated and preternaturally exposed, visit these cities in the summer and autumnal months. Nothing demonstrates so conclusively the wonderful salubrity of the central portion of the United States as an examination of the statistics of disease and mortality proper to the less favored cities of more Southern localities. The figures herein given are taken from a report prepared and published in Louisiana, and by her own citizens; it is, of course, impossible to believe otherwise than that the best picture possible has been drawn of the climate, diseases, and mortalities in that State. All who read such facts can not but sympathize with a brave and undaunted people struggling with these great climatic dangers, and they can not but regret that such great evils are added to the many others which are among the sad inheritances of the late war.

The report of the Engineer shows a most unfortunate condition of the canals, drainage, and drainage deposits in and around New Orleans; but one reads, with pleasure, the many suggestions made for the removal or abatement of these nuisances.

Coal oils have been thoroughly examined in regard to their purity and safety. The laboratory examinations demonstrate that not one of the so-called patents in any degree removes the danger and explosiveness of these oils. They are all dangerous.

In the laboratory, examinations have also been made to test the purity and wholesomeness of the so-called "golden syrups" of commerce. It is well known that these syrups are all made by boiling corn or potato starch in water acidulated with sulphuric acid, the mass being thus converted into grape sugar; but while this was known, there has been a suspicion generally attaching to such syrups and rendering them the theme for frequent censure and warning. It is a pleasure to find that these syrups are what they are represented to be, true syrups; safe and nutritious.

The Inspectors give excellent average results in regard to the market milk of the Crescent City; the lactometer showed a general average of 17.19; 20 representing the best Orange County (N. Y.) milk.

Trichinæ were very rarely, indeed, discovered, though examinations for them were constantly made.

Insufficient street cleaning is everywhere demonstrated and censured.

The privy vaults seem to be but little less than nuisances; "they should," as the law states, "be built but eighteen inches below the surface."

Intra-mural burials are very properly and severely condemned.

In the valuable experiments made in regard to sewage and sewage disinfectants, it was found that crude carbolic acid (No. 2 of commerce) is the best disinfectant that can be used, and it is also the cheapest; sulphate of iron costing $1\frac{1}{2}$ cents, crude carbolic costs 4 mills. The recommendation made in this connection is well worthy of being republished. For general purposes—viz., privies, gutters, drains, etc., "the carbolo-hydrochloric disinfectant is recommended." This is made thus, "by dissolving carbonate or sesqui-oxide of iron in strong

hydro-chloric acid; to the acid thus saturated with iron, one-six hundredths of carbolic acid is added." "Half a pint of this will keep a privy from odor for ten days." Sulphate of iron is also recommended for open gutters, for stables, drains, etc.; "three pounds to a bucketful of water, with the addition of a half pint of crude carbolic acid, being a most convenient and efficient mixture." Lime is condemned.

Public urinals, public baths, and drinking fountains are recommended with much emphasis.

There are several facts incidentally mentioned in this report that are interesting and valuable. In showing the enormous effect which running water, with its contained free oxygen, has upon sewage, it is stated that Mr. Bazalgetto, Chief Engineer of London, in his report to the British Parliament, gives the following interesting facts: There are poured into the Thames daily at London 95,000,000 gallons of sewage; before receiving this mass, the Thames water contains two and twenty-nine one hundredths (2.29) grains of organic matter per gallon; at London bridge, nearly the centre of London, the Thames water contains 2.71 of organic matter per gallon; showing that the immense mass of sewage poured into the river only increases the amount of organic matter four-tenths of a grain per gallon. The effect of "flushing" sewers and drains in cities with fresh water, is thus beautifully demonstrated:

In showing that it is organic vapor in sewage gas, and not carburetted hydrogen, or carbonic acid which produces such terrible results, some valuable facts are placed on record; thus Prof. Angus Smith, of London, found that in soda-water manufactories, where the atmosphere contained more than ten times the amount of carbonic acid usual in ordinary atmospheres, the workmen were not inconvenienced, while the air of a room contaminated by the breathing of human beings, and containing from this source two parts in a thousand of carbonic acid (the air at the soda-water manufactory containing five parts in one thousand) was injurious. Hammond and Gavret, in France, took air which had been used in respiration, and after remov-

ing the carbonic acid from it, passed it into glass jars; animals placed in these jars died in less than one hour; showing that it is more the organic vapor in respired air that is destructive or poisonous than (as is usually claimed) the carbonic acid. This fact explains, in a great measure, the peculiarly fatal effects of sewer gas.

This report is embellished with handsome mortality and water charts. Much more of value could be cited from it, but this review has already been accorded more than the usual space. The names of the medical officers connected to it are as follows: Inspectors, Drs. J. S. Clark, F. P. Albers, A. W. Perry, T. A. Mathieu, C. A. Ames; President Board of Health, C. B. White, M. D.; S. S. Russell, M. D. Secretary.

The report of this Board of Health is creditable indeed. After reading it, one looks at the report of the Board of Health of this city in disgust. It is not only worthless, but puerile and deplorable.

Letter from the Secretary of the Treasury on the Report of the Supervising Surgeon of the United States Marine Hospital Service for the Six Months ending December 31, 1871.

This report evinces the result of an enormous amount of labor on the part of John M. Woodworth, M. D., Supervising Surgeon United States Marine Hospital Service. The value of the report consists in its tabulated statements absolute, and comparative. As the result of the work of this officer, the cost of the Marine Hospital Service for the six months ending December 31, 1871, has been very much reduced; the economy amounts to $40,050. This is good and useful labor.

Annual Report of the Board of Trustees of the Mississippi State Hospital, Vicksburg, Miss., 1872.

This Institution is under the charge of J. B. Hicks, M. D. The Report manifests a very laudable degree of efficiency and good management. As is the case in so many States, many lunatics who could not be received in the over-burdened asy-

lums have been sent to the State Hospital. This evil is great, and the States should be prompt to institute a wise and corrective legislation. Dr. Hicks makes wise and efficient recommendations.

REPORT OF THE STATE OF THE NEW YORK HOSPITAL AND BLOOMINGDALE ASYLUM. 1871.

This report shows that the old Bloomingdale or New York Hospital is closed; that with a capacity for 550 patients, it had not for several years given a current accommodation to more than half of that number. It appears in latter years to have been chiefly a marine hospital, largely supported by the United States Treasury, for the relief of marines. This old Institution has disappeared, and the locality given up to business houses. Though closed since February, 1870, the Report gives advertisement to a full staff of medical officers; physicians, attending and consulting; surgeons, attending and consulting, etc. This is somewhat (at least) Pickwickian; what Mr. Weller would have termed "werry strange, werry strange indeed."

The New York brethren understand well the advantages of these advertisements, and while the critical may smile so pleasantly as to put up the winged shaft of satire and ridicule, the laity are duly and properly impressed; and if they are impressed, why, who cares for other results; when they applaud this is victory; "*odi profanum vulgus*" was the creed of the ingenuous Horace, but he was a poet only; with such nonsense on his lips, he could never have reached the exalted dignity of a hospital physician.

There are many sly ones in the Empire City, and our Profession is not, as a rule, wholly unrepresented in that astute and cunning brigade. Tell them that Helmbold understands the magic power of an advertisement, and they will smile, thinking that perhaps there are others as wise as he; but they keep reciprocally silent; the Sphynx was never more expressionless or impenetrable.

The Governors contemplate transferring this old Hospital to the Bloomingdale Asylum Buildings; erecting new asylum

buildings at White Plains. The success of Bellevue Hospital does not seem to afford the Governors special pleasure. The secret of their most decorous and unexuberant joy could be solved by one less astute than Œdipus. The Asylum is, as usual, in excellent condition. Its worthy and accomplished physician, D. Tilden Brown, maintaining now, as he has always done, the Institution in the highest degree of efficiency. For twenty years he has discharged his trust with distinguished ability and success.

Report of the Western Lunatic Asylum, Hopkinsville, Ky., 1871–2.

Dr. James Rodman, as Superintendent of this Institution, has made a very satisfactory report. The Asylum appears to be in excellent condition. It is over-crowded, however, and there is great demand for increased accommodation. Most of the report is devoted to a demonstration of the necessity for more asylum accommodation in the State. The arguments used embody familiar facts, extracted from authentic and well-known authorities. The facts cited are important and impressive; they have been well selected and accurately presented.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."---Hor.

Notes on Carbolic Acid. By William C. Bakes.

Few substances have acquired greater popularity, and given such general satisfaction, as carbolic acid. For a long time it was exclusively used by the Medical Profession, but the public having heard of its antiseptic and disinfectant properties have adopted it in various forms as one of their household requisites.

Its use as a remedial agent dates from 1859, when M. Le Beuf, of Bayonne, France, employed the then crude carbolic

acid in the form of a saponaceous emulsion. He assisted in the work of M. Lemaire, of Paris, who has made it the foundation of a laborious research. The two investigators sent to the Academy of Medicine a paper on the value of the emulsion as an application to gangrenous ulcers. M. Lemaire continued his investigation, and published an elaborate treatise in 1863, in which he narrated a series of experiments in which carbolic acid was employed as a means for the destruction of the low forms of animal and vegetable life, as a preventive of fermentation and putrefaction, as an external application in cases of ulcerating and suppurating surfaces, as well as an internal remedy in zymotic and other diseases. While carbolic acid was attracting attention as a disinfecting agent, experiments were being made as to its use in the arts. Laurent, in 1841, after a series of investigations, produced picric acid by the action of nitric acid upon carbolic acid. Picric acid is used as a yellow dye, and from it are derived picramic acid and isopurpurate of ammonium, yielding rich brown and garnet hues.

In 1865 Professor Lister began the use of carbolic acid in surgical cases attended with suppuration, and gave the result of his investigations in several communications to the "Lancet," in the March and July numbers of 1867.

To the pharmaceutist the preparations of carbolic acid are of some interest, and demands are often made for the various combinations without any definite formula.

A valuable work of 356 pages has recently been published, entitled "The Antiseptic System—A Treatise on Carbolic Acid and its Compounds," etc., by A. E. Sansom, M. D., of London, which contains much useful information; relating not only to the chemistry of carbolic acid, but to its general employment in medicine. In the appendix a series of formulæ are given as follows:

1. *Liquefied Carbolic Acid.—A.* Calvert's purest (No. 1) acid, liquefied by placing the bottle containing it in hot water, 9 parts; water, 1 part. Mix well.—*Calvert.*

B. Pure carbolic acid, 15 parts; alcohol, 1 part. Mix well. This keeps fluid at all ordinary temperatures.—*Sansom.*

For many purposes, especially for dispensing, it is convenient to keep the acid in a liquid form, otherwise the crystals must be melted by heat each time that the acid is employed.

2. *Solution of Carbolic Acid in Water.*—To obtain uniform solution, it is better to slake the carbolic acid with four times its bulk of hot water, and then to add a sufficiency of cold water; or the carbolic acid may be first mingled with alcohol, which causes more ready solubility, before the addition of cold water. Water will not dissolve more than one-twentieth of its bulk of carbolic acid.

3. *Alcoholized Carbolic Acid* (Acide Phénique Alcoholisé).—Alcohol (90), crystalized carbolic acid, equal parts. Mix, and keep in a well-stoppered bottle: Used for making carbolized solutions, etc. Being more fluid than carbolic acid, it more readily penetrates the tissues. Useful in poisoned wounds, for application to small-pox pustules, etc.—*Lemaire.*

4. *Etherized Carbolic Acid* (Ether Phénique).—Sulphuric ether, 100 parts; carbolic acid, 1 part. Used for insufflation in catarrh of Eustachian tube.—*Lemaire.*

5. *Carbolized Vinegar* (Vinaigre Phénique).—Ordinary Vinegar, 4 parts; carbolic acid, 1 part. Mix. For use instead of aromatic vinegar, as a disinfectant, etc.—*Quesneville.*

6. *Glycerinum Acidi Carbolici.*—Carbolic acid, 1 ounce; glycerine, 4 fluid ounces. Rub them together in a mortar until the acid is dissolved.—*British Pharmacopœia.*

7. *Carbolized Glycerine* (Glycerine Phéniquée).—Pure glycerine, 100 parts; carbolic acid, 1 part. Mix. For impetigo, chronic eczema, lichen, prurigo, and pemphigus.—*Lemaire.*

8. *Syrup of Carbolic Acid* (Sirop d'Acide Phénique).—Simple syrup, 100 parts; carbolic acid, crystalized, 1 part. Mix.—*Chaumelle.*

9. *Carbolic Acid Liniment.*—For counter-irritation.

A. Alcohol, 50 parts; carbolic acid 1 part. Mix.—*Lemaire.*

B. Olive oil, 7 parts; carbolic acid, 1 part. Mix.—*Sansom.*

10. *Compound Disinfectant Solution.*—Water, 1,000 parts; carbolic acid, 10 parts; sulphate of zinc or sulphate of iron, 3 parts. Mix. Carbolic acid has no chemical action on sulphuretted hydrogen or carbonate of ammonium. When it is employed alone as a disinfectant, deodorization does not take place until the gases have disappeared by diffusion. The sulphates change the sulphuretted hydrogen into sulphides, and the carbonate of ammonium into metalic carbonate and ammonium sulphate—all inodorous compounds.—*Lemaire.*

11. *The Suvern Deodorant.*—Good quick-lime, 1½ bushels, put in a cask, slaked, and well stirred; coal tar, 10 lbs. Mix thoroughly, then add magnesium chloride, 15 lbs., dissolved in hot water. Mix again, and add hot water until the mass is liquid enough to drop slowly from a stick plunged into it, and then withdrawn. The magnesium chloride forms deliquescent calcium chloride. Magnesia being liberated, this prevents caking and adherence to pipes, which is a defect when lime alone is used.—*Parkes.*

12. *Carbolized Earth* (Terre Coaltarrée.)—Common loam, passed through a sieve, 100 parts; coal tar, 2 parts. Mix intimately. Disinfectant for crops and for destruction of noxious insects.—*Lemaire.*

13. *Solution of Carbolic Acid for the Toilette.*—Crystalized carbolic acid, 10 parts; essence of millefleur, 1 part; tincture of *Quillaya saponaria*, 50 parts; water, 1,000 parts. Mix. The saponin replaces soap with advantage. The above should be employed, diluted with ten times its bulk of water, for disinfecting the skin, for washing the hands after any risk of contagion or inoculation, etc.—*Lemaire.*

14. *Tincture of Saponin*, as used in the foregoing preparation, is thus made: Bark of *Quillaya saponaria*, 1 part; alcohol (90°) 4 parts. Heat to ebullition, and filter.—*Le Beuf.*

15. *Carbolized Water for the Teeth.*—Water, 1,000 parts; essence of meat, 2 parts; tincture of saponin, 50 parts; pure

carbolic acid, 10 parts. Mix. A dessert-spoonful in a quarter of a tumblerful of water serves as an excellent preparation for cleansing and preserving the teeth.

16. *Carbolized Ointment.*—Purified lard, 100 parts; carbolic acid, 1 part. Mix. Considered of some service in skin affections; but, modified as it is by the fat, it cannot replace the aqueous solution of carbolic acid.—*Lemaire.*

17. *Carbolized Amylaceous Ointment.*—Pure starch, 3 parts; hot water, 20 parts. Mix, in the ordinary way (the starch being made first into a paste with cold water, and then hot water added) to a stiff consistence; then add olive oil 1 part, glycerine 3 parts, carbolic acid 1 part, and thoroughly mix in a mortar. When cool this is a soft jelly, which can easily be applied as ordinary ointment. It is much more efficacious than one the basis of which is entirely fat, and it is an agreeably cool application.—*Sansom.*

18. *Carbolized Oil.*—*A.* Crystalized carbolic acid, 1 part; boiled linseed oil, 4 parts. Dissolve.—*Lister.*

B. Pure carbolic acid, 1 part; olive oil, 6 parts. Olive oil is better than linseed oil as a vehicle, as the latter is more prone to oxidation.—*Calvert.*

19. *Carbolized Putty.*—Carbolized oil, about 6 tablespoonfuls; common whiting (chalk) sufficient to make a firm paste. *Lister.*

20. *Antiseptic Lead Plaster.*—Olive oil, 12 parts (by measure); litharge (finely ground), 12 parts (by weight); beeswax, 2 parts (by weight); crystalized carbolic acid, $2\frac{1}{2}$ parts (by weight). Heat half the olive oil over a slow fire; then add the litharge gradually, stirring continually until the mass becomes thick or a little stiff; then add the other half of the oil, stirring as before, until it becomes thick again. Then add the wax gradually till the liquid again thickens. Remove from the fire and add the acid, stirring briskly till thoroughly mixed. Cover up close, and set aside to allow all the residual litharge to settle; then pour off the fluid, and spread upon calico to the proper

thickness. The plaster made in this way can be spread by machine and kept rolled in stock, and if in a well-fitting tin canister will retain its virtues for any length of time.—*Lister.*

21. *Antiseptic Lac Plaster.*—Shellac. 3 parts; crystalized carbolic acid, 1 part. Heat the lac with about one-third of the carbolic acid over a slow fire till the lac is completely melted; then remove from the fire and add the remainder of the acid, and stir briskly till the ingredients are thoroughly mixed. Strain through muslin, and pour into the machine for spreading plaster, and when the liquid has thickened by cooling to a degree ascertained by experience, spread to the thickness of about one-fiftieth of an inch.

Afterwards brush over the surface of the plaster lightly with a solution of gutta-percha in about 30 parts of bisulphide of carbon. When the sulphide has all evaporated, the plaster may be piled in suitable lengths in a tin box without adhering, or rolled up and kept in a canister.—*Lister.*

22. *Antiseptic Cere-cloth.*—Cloth or thin calico is saturated with cerate (made after the following formula), by simply drawing a portion through it while in a fluid state, or in pieces of any length and width, by rolling, by means of a machine, the calico over cylinders containing cold water as fast as it has taken up the cerate.

A. Strongest Cerate.—Calvert's pure carbolic acid, liquefied, 3 fluid ounces; olive oil (colored red with alkanet root to distinguish the cerate), 1½ fluid ounce; yellow wax, liquefied, 1½ fluid ounce; paraffine, liquefied, 6 fluid ounces. Mix.

B. Medium Strength.—Pure carbolic acid, 2 fluid ounces; olive oil, 2½ fluid ounces; paraffine, 5 fluid ounces; yellow wax, 2½ fluid ounces. Mix.

C. Weakest.—Pure carbolic acid, 1½ fluid ounce; olive oil, 1 fluid ounce and 6 drachms; white wax, 1 fluid ounce and 6 drachms; paraffine, 7 fluid ounces. Mix.

23. *Antiseptic Muslin Gauze.*—Paraffine, 16 parts; resin, 4 parts; crystalized carbolic acid, 1 part. Melt together. Cheap

muslin gauze is dipped in the melted mass and well wrung or pressed while hot. A good substitute for oakum as an antiseptic covering for wounds, unirritating to the most sensitive skin, highly retentive of the acid, and almost destitute of odor. It should, when used, be folded in about eight layers. It loses the paraffine and resin when washed in boiling water, so the same gauze may be used repeatedly.—*Lister.*

24. *Protective Against Local Irritating Effects of Carbolic Acid in Antiseptic Dressings.*—Varnish oiled silk on both surfaces with copal varnish. When dry, brush over with a mixture of starch and dextrine, to give it a film of material soluble in water, so that it becomes uniformly moistened when dipped into antiseptic lotion. When not at hand, common oiled silk may be used as a substitute for it, if smeared with an oily solution of carbolic acid, and used in two layers, to make up for its inferior inefficiency.—*Lister.*

25. *Antiseptic Adhesive Plaster.*—Dip ordinary strapping in hot solution of carbolic acid, made by mixing 1 part of 1 to 20 lotion with 2 parts of boiling water. Will adhere to a moist skin, so that it may be employed under spray when advisable. *Lister.*

26. *Carbolized Powders.*—Pure liquefied carbolic acid, 5 parts; alcohol, 5 parts. Mix. Add by degrees 100 parts of one of the following powders: Lycopodium, starch, charcoal, plaster of Paris. The proportion of carbolic acid can be increased or decreased as desired.—*Sansom.*

27. *Antiseptic Catgut Ligature.*—Catgut of the thickness required is to be kept steeped in carbolized olive oil (1 pint in 5), with a very small quantity of water diffused throughout it.—*Lister.*

28. *Aceto-Carbolic Solution for Tinea and Scabies.*—Acetic acid (pyroligneous), 8°, 20 parts; pure carbolic acid, 5 parts; water, 75 parts. Mix the two acids and add the water. The acetic acid favors penetration through the epidermis. For

tinea, apply the liquid once a day over the diseased parts by means of a brush. For scabies, sponge all the parts. The clothes, etc., of the affected individual should also be treated with the liquid.—*Lemaire.*

29. *Carbolized Gargle for Diphtheria, Tonsillitis, etc.*—Carbolic acid, 20 minims; acetic acid, ½ drachm; honey, 2 fluid ounces; tincture of myrrh, 2 fluid drachms; water, 6 fluid ounces. The carbolic and acetic acids to be well shaken together before the other ingredients are added.—*Charles Sedgwick.*

30. *Carbolized Mixture for Zymotic Diseases.*—Carbolic acid, acetic acid, of each 1 drachm to 1½ fluid drachm; chloric ether, 1 fluid drachm; water, 8 fluid ounces. A tablespoonful every four hours until the fever has subsided.

31. *Mixture of Quinine and Sulpho-Carbolate of Sodium.*—Quinine sulphate, 1 grain; sulphuric acid, 5 minims. Dissolve, and add to the solution of sodium, sulpho-carbolate, 20 grains; in water, 1 fluid ounce.—*Bakes.*—*Amer. Jour. of Pharm.*

On Powdered Camphor. By John C. Lowd., Boston, Mass.

Query.—How may camphor be reduced to a fine powder and retained in the pulverulent condition?

The query on this subject having been referred to the writer, he hereby submits to your honorable body the result of an experiment.

The various methods for reducing camphor to a fine powder, suggested by different writers, are singularly deficient. The objections are the expense and incomplete results, through the moist condition of the powder when precipitated from an alcoholic solution, rendering it unavailable for the purposes for which it is largely employed in the manufacture of errhines, tooth powders, etc.

Camphor possesses the advantageous property of resublimation without losing any of its valuable qualities. This furnishes a suggestive hint capable of being carried out in the preparation of fine powder. The method I have tried with

complete success, consists in vaporizing the camphor from a retort into a large chamber, and its collection in the form of a fine dry powder.

The apparatus used consists of a four-wick lamp, containing one pint of alcohol; a copper retort four inches diameter by ten inches high, having a curved neck fourteen inches long and two inches diameter; a chamber or receiver made of strong paper, rendered impervious by any suitable sizing. The paper is stretched upon a light frame of wood, so as to form a cubical chamber of three feet in length, breadth, and height, with an aperture on one side within a foot of the top, in order to receive the neck of the retort. Care must be taken to lute around the joint where the retort connects with the receiver, on account of the inflammability of the vapor. The quantity used is one pound of camphor, and the time required to sublime it about thirty minutes.

The advantages of this process are its availability and economy, the perfect condition of the powder as to its purity, dryness and degree of fineness. It will retain its pulverulent condition if kept in full bottles, well worked, in a cool place.—*Proceedings of the Amer. Phar. Association*, 1871.

Gastric Juice in the Treatment of Cancer.—Dr. D'Arpem ("L'Union Medicalé," Sept. 2, 1871, from "L'Imparziale") gives the particulars of a case of ulcerated cancer of the rectum treated by injections of artificial gastric juice. After the employment of other remedies, which had proved inefficacious, twenty-five grammes of gastric juice, obtained from Professor Schiff, and made into an emulsion with glycerine, were administered by injection. The immediate effect of this was to produce intense pain in the rectum, palpitation of the heart, and vesical tenesmus. An hour after, the patient passed blood, partly liquid and partly in clots, together with a gelatiniform débris, which had a very repulsive odor. The next day the remedy was repeated, but was followed by the injection of sweet oil to mitigate the pain arising from it. The same effects were

produced, except that the suffering was less severe. The injections were administered three times daily during twenty days, at the end of which she considered herself well; but, at the recommendation of Dr. D'Arpem, she continued their use for eight days longer. Having at that time ceased to pass any debris of the tumor, she afterwards used only injections of sweet oil. After a long absenoe, she again presented herself to Dr. D'Arpem, who says the cure at time was complete.

Vapor of Ammonia in the Treatment of Whooping-Cough. Mr. John Grantham states ("British Medical Journal," September 10, 1871,) that in cases of whooping-cough in the last stage, (that is, after the third week) he has had one ounce of the strongest liquid ammonia put into a gallon of boiling water in an open pan, and the steam kept up by means of half a brick made red-hot throughout and put into the boiling water containing the ammonia, the pan being placed in the centre of a room, into which the patients were brought as the ammoniated steam was passing off. "This method was used in the evening, just before bed-time; and it has been so efficacious," he says, "in abating the spasmodic attack, and after three or four days terminating the malady, that I cannot overestimate the great value of this mode of inhaling the ammonia as a therapeutic agent in tranquilizing the nervous system in whooping-cough.' *Medical News and Library.*

Antidote to Carbolic Acid.—Dr. Theodore Husemann opposes the use of fixed oils, glycerine, and similar demulcents in cases of poisoning by carbolic acid; but recommends, based upon experiments, with rabbits, made by himself and Ummethun, the saccharate of lime, the alkaline earth combining with the carbolic acid to form a non-poisoning salt. Lime water is less adapted to this purpose, owing to the sparing solubility of lime in water, and the large quantity of lime water required for neutralizing the poison. Precipitated carbonate of lime does not combine with carbolic acid, but may be employed in case the saccharate of lime should be procurable at once; the carbonate appears to

act merely mechanically by absorbing the poison, and thus delaying the ill effects; sufficient time is thereby afforded to prepare the saccharate.—*Ex.*

Chloral for Toothache.—Dr. Page, in the "British Medical Journal," recommends chloral hydrate as a local application in case of toothache. A few grains of the solid hydrate introduced into the cavity of the tooth upon the point of a quill speedily dissolves there; and in the course of a few minutes, during which a not unpleasant warm sensation is experienced, the pain is either deadened, or more often effectually allayed. A second or third application may be resorted to if necessary.

Croton Chloral.—Dr. Oscar Liebreich, of Berlin, to whom we owe that invaluable therapeutic agent, hydrate of chloral, has lately been investigating the physiological properties of a new organic compound, which is formed by the action of chlorine upon allylene—viz., croton chloral. When administered to animals, a peculiar effect is produced, the head being to a great extent rendered insensible to feeling, while the rest of the body remains comparatively sensible. If the inhalation is prolonged, the spinal cord loses its function, and reflex excitability is everywhere extinguished. During that stage, both pulse and respiration remain unchanged. The third stage, which is induced by large doses, is characterized by paralysis of the medulla oblongata and death. Animals may, however, be kept alive by artificial respiration, because the action of the heart is not interfered with, while the ultimate effect of hydrate of chloral is to paralyze the heart. Croton chloral, therefore, promises to produce all the good effects of hydrate of chloral, without any drawback being attached to its judicious use. *Mechanics' Magazine.*

Action of Chlorides on Calomel.—In the "American Journal of Pharmacy," August, 1871, Mr. Michael J. Cummings reports that, contrary to the opinion of Mr. Mialhe, but supporting that of Dr. Gardner, he has found that calomel is not converted into corrosive sublimate by the chlorides of the alkali-

fiable metals at the temperature of the body. The change occurs less readily with chloride of sodium than with chloride of ammonium, but in neither case at a lower temperature than 110° Fahr.

Artificial Ivory for Billiard Balls.—It is said that billiard balls are now made, both for American and foreign trade, which are claimed to be more durable than those of true ivory. These balls are composed principally of gun-cotton, reduced to a fine pulp and moulded. The other ingredients are as yet a secret, which the makers do not desire to make public. After moulding, the ball is put in a press, and reduced about one-third in bulk. It is then put away to be dried. When partially dry, it is put into a bowl of quicksilver to test the uniformity of its centre of gravity. If not true in its balance, it is thrown aside; if true, it is again pressed, and again put on the shelf to be thoroughly dried before it is taken to the turner and polisher. Three months elapse from the day of moulding till the time when a ball is ready to be sent to purchasers. The balls cost about one-half the price ordinarily charged for ivory balls.—*Ex.*

A Test for Pus.—Dr. Day, of Australia, has made some interesting observations on pus, which we quote from the "London Medical Times and Gazette":

"In 1868," he observes, "I had the good fortune to discover a very delicate test for pus, and have since been in the almost daily habit of applying it, in conjunction with other tests, as aids to diagnosis. In this way I have learned some very interesting facts regarding the properties of pus. For instance, I have found that healthy pus, when dried, becomes chemically inactive; although, when moistened with water, it again resumes its chemical activity; also that pus derived from persons suffering from diseases allied to erysipelas, possesses unusual activity—more than that from healthy persons—and which it is capable of retaining for years.

"On this paper are two spots of pus, which had been allowed

to dry by exposure to the air. To one has been added the pus-test alone, with, as you may see, a negative result, dry pus being devoid of chemical activity. To the other a drop of water is added, and then a drop or two of the pus-test, with the result which always follows the application of this test to moist pus—namely, a bright-blue reäction.

"I mentioned just now that pus from persons suffering from diseases allied to erysipelas is more active in its chemical properties than healthy pus. On this piece of glass is some pus taken from a large carbuncle on the neck of an elderly gentleman two years and three months ago. He was suffering from symptoms of blood-poisoning at the time. This pus, as you will see, although it has been freely exposed to the air during the whole time, and sometimes to great heat, still retains its power of acting chemically on the pus-test; and it does so even when dry, thus showing that it possesses greater chemical activity than ordinary pus.

"You will perceive that, in the explanation I have attempted regarding the influence of moist and dry air over the propagation of erysipelas and its allied diseases, I have assumed that when the chemical activity of pus is suspended, its power to act as a poison on the system is also suspended.

"I will trespass on your time by bringing one other experiment under your notice, as it may help to explain the *modus operandi* of Prof. Lister's antiseptic treatment of wounds.

"I have found that carbolic acid possesses the property of entirely and permanently destroying the chemical activity of pus, whether derived from healthy or unhealthy persons. On this paper is some pus which had been moistened with water to give it chemical activity. A few drops of watery solution of carbolic acid were then poured over it, and after the lapse of a quarter of an hour, the pus-test was applied, with, as you may see, a perfectly negative result."

Dr. Day's pus-test is so simple in the mode of appliance, and apparently so certain in its revelations, that we have little doubt it will soon come into daily use as an aid to diagnosis.

He prepares his test-fluid by exposing a saturated alcoholic solution of guaiacum to the air until it has absorbed a sufficient quantity of oxygen to give it the property of turning green when placed in contact with iodide of potassium. On moistening the most minute quantity of pus with water, and pouring a drop or two of the test-fluid over it, a clear blue color is produced.

Bromide of Calcium.—Dr. William A. Hammond, in a note to the "New York Medical Journal," calls attention to the bromide of calcium, which contains a large amount of bromine (every 100 grains containing 79.5 grains of bromine), and which in consequence of its instability and of the readiness with which it parts with its bromine is especially useful in those cases in which speedy action is desirable. It has a powerful hypnotic influence, and hence is particularly beneficial in cases of delirium tremens, or the insomnia resulting from intense mental labor or excitement. In the treatment of epilepsy Dr. H. does not think it possesses any advantages over the bromide of potassium or of sodium, except in those cases in which the paroxysms are very frequent, or in cases occurring in very young infants. It does not appear to cause acne to anything like the extent of the bromides in more general use.—*Exchange.*

Borax, Domestic Uses of.—Borax is the best cockroach exterminator yet discovered. This troublesome insect has a peculiar aversion to it, and will never return where it has been scattered. As the salt is perfectly harmless to human beings, it is much to be preferred for this purpose to the poisonous substances commonly used.

"Borax is also valuable for laundry use, instead of soda. Add a handful of it, powdered, to about ten gallons of boiling water, and you need use only half the ordinary allowance of soap. For laces, cambrics, etc., use an extra quantity of the powder. It will not injure the texture of the cloth in the least.

"For cleansing the hair, nothing is better than a solution of

borax water. Wash afterward with pure water, if it leaves the hair too stiff. Borax dissolved in water is also an excellent dentrifice, or toothwash."—*Boston Journal Chemistry.*

MISCELLANEOUS.

"Non omnes eadem mirantur ament que."

Solution of Santonine. By John Harley, M. D., etc.—The insolubility of this vermifuge impairs its utility. Cold or warm water takes up the merest trace. Chloroform, absolute alcohol, the strongest acetic acid, turpentine, hot olive oil, and hot glycerine are the only simple fluids that dissolve any appreciable quantity. On cooling, it separates from the oil and glycerine; and the addition of water to the other solvents produces the same result.

It is obvious, therefore, that none of these solvents are adapted for the use of santonine as a medicinal agent. A wish to determine the effect of santonine in parasitic diseases of the bladder and bowels, led me, after a good deal of trouble, to find that I could form a stronger solution than was needed for my purpose by means of bicarbonate of soda.

I may formularize my results thus: ℞—Santonini, in pulvere, gr. xij.; Sodæ Bicarbonatis, gr. xx; Aquæ distillatæ, ℥ iij. Put the soda and water into a flask; keep the liquid near the boiling point, adding, as it disappears, about two grains of santonine at a time, till the whole is dissolved. Solution is effected in about half an hour, during which time the water is reduced to ℥ ij. If need be, reduce by boiling to this bulk, when ℥j will contain a full dose—six grains of santonine. If an alkaline reäction be objectionable, neutralize with acetic acid.

Characters of the Solution.—Bright and permanent, strongly alkaline, free from odor, and, excepting that of carbonate of soda, of taste. Carefully neutralized with acetic acid, an

equally bright and permanent neutral solution is formed. Both the alkaline and neutral solution may be diluted to any extent with either cold or hot water, without impairing the perfection of the solution of the Santonine. Excess of acetic acid, after some hours, and the mineral acids immediately precipitate the whole, or nearly the whole, of the santonine unchanged and in its original form of colorless, rectangular plates with beveled edges.

Use.—By the process above described, we obtain a bland *alkaline solution*, so completely void of irritating qualities that it may be dropped into the eye without causing the least sensation; and a *neutral solution*, for use in those cases in which an alkali would be unsuitable.

As an injection ℥ ss to ℥ j (three to six grains) of either solution may be mixed with three or four ounces of warm water and passed into the bladder or rectum.

In cases where powders are objected to, a pleasant mixture may be made by adding a little syrup and flavoring water to the santonine solution.—*London Practitioner*, February, 1871, p. 85.

Koussin. By Professor Leidesdorf, Vienna.—The examination of the flowers of the *Brayera anthelmintica* by many chemists—Wittstein, Pavesi, and Bedall, shows that the active principle is a bitter, which Pavesi describes as Koussin or Tænin. Bedall, apothecary in Munich, shows that genuine Koussin is light yellow in color, with a scent like leather, hardly soluble in water, but will dissolve in alcohol or pure alkalies. Koussin is taken in doses of two scruples, divided into two powders, and swallowed with an hour of interval; it requires no preparation, and leaves behind it no bad consequences. Three or four hours after taking it there follows a diarrhœa-like motion, with which the tape-worm passes away. Dr. Dietrich has made numerous experiments with this remedy, and has published these, and Dr. Leidesdorf has lately verified the experiments in the case of a shopkeeper, N. N., recently taken into hospital for insanity, who had for a long period suf-

fered from tape-worm. On the 15th of May, two hours after breakfast, at 9 A. M., a scruple, at 10, a scruple, of Koussin was administered. At 1 P. M., a worm, 17 metres long, came away (*Bothriocephalus latus*) with the head. This is an interesting case.—*The Doctor*, Aug. 1871, p. 141.

On the Immediate Union of Wounds. By Dr. Gussenbauer, of Vienna.—Macartney, Paget, and lately Thiersch, maintain that some wounds heal by direct agglutination of their respective margins and surfaces, which mode of union they have termed "immediate." The last-mentioned pathologist thinks he has observed immediate union in lingual wounds of rabbits.

In order to bring this question to a final issue, Dr. Gussenbauer, of Vienna, has instituted a series of experiments upon the cornea, cartilages of the ear, nose, ribs, and trachea; the skin and muscles of rabbits and dogs, and the tongues of the latter. The wounds of the different structures have been methodically examined by him in periods of from 24 hours to 60 days after the infliction of the injury, and the microscopical results have been described and most handsomely illustrated in Langenbeck's Archiv.

Referring the reader to the original for the details of the author's very interesting and instructive observations, we limit our report to his concluding remarks:

"The results of my researches enable me *to deny* in toto the process of immediate union of wounds. If the continuity of the tissues be divided by a simple incision, and the opposite surfaces of the wound be kept in close approximation, *an intermediate substance* of coägulated structural fluid effects the new union. The cicatrix remains persistent; and although it *approximates* in a measure the tissue within which it is located, it nevertheless preserves its structural differences, at any time demonstrable by the microscope."

John Hunter's views are thus fully maintained by the latest and most thorough investigations.—*Ex.*

Ancient Dentistry.—Dr. Reid, of Terre Haute, read a paper

upon ancient dentistry. Among the ancients great success was obtained in this art. Casselius was a dentist in the reign of the Roman triumvirs, and gold was used for the filling. But nearly 500 B. C., gold was thus used, and gold wire was employed to hold artificial teeth in position; and it does not seem then to have been a new art. A fragment of the tenth of the Roman tables, 450 B. C., has reference to the burial of any gold with the dead except that bound around the teeth. Herodotus declares that the Egyptians had a knowledge of the diseases of the teeth and their treatment 2,000 B. C. In Martial, Casselius is mentioned as either filling or extracting teeth; but he specified that he would not polish false teeth with tooth-powder. Lucian mentions an old maid that had but four teeth, and they were fastened in with gold. These facts cover a period of 600 years.—*Med. and Surg. Rep.*

Muscular Power and Endurance.—The Newark "Advertiser" gives the following: The wonderful flight of the carrier pigeon Tempest to Montclair, N. J., was noticed some time since. We have now to record the still more extraordinary time of two other birds sent home. The following notes were found on them on their arrival:

Dear Father—September 15, 1871—Lat. 27 deg. 10 N., long. 79 deg. 30 W., 1,004 statute miles from Montclair, N. J.—I will let the male bird Tornado go with this note at exactly 9 o'clock A. M., New York time. I let the bird Tempest go on the 10th. She rose up about 500 yards high, and then made one tremendous plunge to the North, and was out of sight about as quick as a flash of lightning.

HARRY C. BLEECKER.

Dear Father—Sept. 21, 1871—Lat. 26 deg. N., long. 93 deg. 5 W., 1,506 statute miles from Montclair, N. J.—I will let the old bird Typhoon go with this note at exactly 8 o'clock A. M., New York time. He is a powerful bird, but he has a fearful job on hand. He must go through it or perish. All well.

HARRY C. BLEECKER.

The bird Tornado arrived at Montclair the same day at three and seven minutes P. M., making over 196 miles an hour. Typhoon arrived the same day at three o'clock and fifty-four minutes P. M., and fell dead on his arrival, but he brought the note in the unprecedented time of 202 miles an hour.—*Ex.*

Diagnosis of Phantom Abdominal Tumors.—In an interesting clinical lecture published in the "Medical Times," Dr. J. M. De Costa states that the most efficient mode of diagnosticating phantom tumors of the abdomen, is by the use of an anæsthetic. When under the influence of ether, a phantom tumor will disappear, and thus remove all doubt as to the nature of the case. He says, "not in a single instance have I found these apparent tumors remain when the patient is under the influence of ether or chloroform, though they reäppear, and quickly, when he passes from under its influence. Thus, we can control the diagnosis not only of phantom tumors, but muscular contractions of the abdomen, not unfrequently feigned, and which high authority declares a source of difficulty almost impossible to get over."

MEDICAL NEWS.

'Nulla dies sine linea."

The American Journal of Obstetrics.—The first number of this Journal for this year has not yet been issued. Messrs. W. Baldwin & Co., to whom the writer has forwarded money for several subscriptions (and for which receipts are held) writes as follows: (April 15th, 1872), the Journal of Obstetrics has not yet appeared. Dr. Dawson promises it in a few days. We only act as agents for him. The next number will be out about the 15th proximo, if nothing happens in the meantime to delay it. This is all we can say for it." Those who have forwarded, to the writer, money for the "Obstetrical Journal," have, in the above note, all of the facts in his possession. Receipts for this

money are held. All wishing to subscribe for the "Obstetric Journal," will please send their money direct, and not through this office.———The Medical College of Georgia closed its last session on the 1st of March, conferring the degree of M. D. on twenty-one of the class.———*The Distinguished Dead.*—Prof. Samuel Henry Dickson, M. D., LL. D., formerly of Charleston, S. C., and in recent years prominently connected with the Jefferson Medical College of Philadelphia, died March 31, 1872. A sketch of his life will be soon published in this Journal. Dr. Samuel Jackson, Emeritus Professor of the Institute of Medicine in the University of Pennsylvania, died April 6th, at his residence, in this city, at the ripe old age of eighty-two. He was born in Philadelphia on the 22d of March, 1787. He devoted his time with great energy to the study of his profession, and was successful in acquiring a high standing in its practice. In 1835 he was elected Professor of the Institutes of Medicine in the University of Pennsylvania, a position which was filled by him during a period of twenty-eight years, with great credit both to himself and the institution. He was one of the clearest lecturers and profoundest scholars, and occupied a front rank in the corps of professors of the University, a body of men which has long enjoyed the highest reputation for skill and learning throughout the world. In 1863, in consequence of his advanced age, he abandoned the active duties of his professorship, and has since held an Emeritus relation to the University. Prof. Jackson, wrote several works on medical and physiological subjects, the most celebrated of which were a treatise on the "Principles of Medicine," first published in 1822, and an "Introduction to Lehman's Chemical Physiology," published in 1856.—*Phila. Inquirer.* Dr. Samuel A. Billing, a prominent physician of Columbus, Ga., died March 19th, aged sixty-five. Dr. Zina Pitcher, of Detroit, Mich., died April 5, 1872. He was seventy-five years of age. Distinguished personally and professionally, and well worthy of all the very high distinctions which were conferred upon him. His life having once been published in this Journal, the readers are so

familiar with it as to render recapitulation unnecessary.——— Thirty-one physicians have been baroneted by the British Government since 1645.———Dr. J. M. Toner, of Washington, D. C., has, by bequest of real estate and personal property, established a fund, 90 per cent. of the interest on which is "to be applied for at least two annual memoirs or esssays (by different individuals) containing some new truth established by actual experiment." These lectures are to be known as the "Toner Lectures." Competition open to all. The fund is well guarded by trustees, etc. Dr. Toner has recently published some ingenious tables and diagrams intended to demonstrate the reduced productiveness of the American mother. For an old bachelor, this is a very novel and perhaps interesting study, and Dr. Toner, it seems, will become, as a statistician, quite a learned authority upon this mysterious and apochryphal subject. This honest and indefatigable worker is also engaged in having published a Directory of American Physicians. He is performing these labors, and the results will be of great value. He has the good wishes and esteem of all who know him.——— "The fraudulent diploma trade, which has been carried on in the city of Philadelphia for a number of years past, has at last attracted the attention of the Legislature, and the Senate has appointed a committee to investigate the matter. Several meetings have been held, and very curious facts have been elicited. Dr. A. Bissell* declined to answer the question, whether he knew anything about the sale of diplomas, because it might criminate himself. Mr. Jos. B. Reed, reporter for the "Age," testified that Dr. Buchanan, of the Eclectic Medical College, offered him a diploma for $25. Mr. C. S. Bates obtained his diploma from the same college after six months' study; he kills small-pox with sweet spirits of nitre and cold water; has a right to do as he pleases with his own patients, and doctored several years before he got his diploma. Dan Parlow, colored,

* This man rests under the serious misapprehension that he can injure himself; he is so dishonest, worthless, and depraved that he connot well fall lower—Ed.

an herb doctor, received, as a mark of honor, a diploma from Dr. Buchanan through Dr. Bissell. A W. H. Hacks, colored, attended two courses, of about six lectures each, at the American University of Philadelphia, and obtained a diploma for $25. Jonathan Davis, colored, received his diploma from the same institution for $30, after attending one course of (six?) lectures. Dr. Dan. M. Fleming received an honorary degree from the Philadelphia University of Medicine and Surgery for $30. Dr. Harbison told Dr. Hylton that he could get Payne's diploma (Philadelphia University of Medicine and Surgery) to sell to any one who wished to buy them." If the applicant for a diploma was examined, he paid $30 for his diploma, but if not examined, he was charged $200. In one case a diploma was granted to a male baby. It is time that these rascalities were subjected to the lash of the law. The above comprises only a very small portion of the testimony before the Senate committee. The colleges have been closed.—*Ex.*

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

President of the American Medical Association.—For the last public relations of Dr. David W. Yandell (who is very unfortunately) President of the American Medical Association, to the medical public, the reader is referred to the Transactions of the Kentucky State Medical Society, published in this number of the Journal. It will be recollected that when Dr. Yandell was elected (by resorting to an "electioneering" that was simply disgraceful) to the high office which, to the misfortune and humiliation of every respectable physician, he now so disreputably represents, his life was reviewed in this Journal, and it was clearly shown that his election was a real disgrace, a stain upon the American Medical Profession. He replied characteristically; eulogizing himself; advertising him-

self; telling numberless falsehoods, and denying the accuracy of the review of his life which had just been published. The proofs were offered to him; the names of those ready to prove the truth of every assertion were tendered; but, of course, he never came for them. No one who knows him expected that he would. It was then determined that charges embodying the facts of the review should be presented to the American Medical Association, in May, 1872. It became apparent, however, by verbal and written messages sent to the reviewer, that the leading men of the Association mentioned would (without doubting the truth and sincerity of the charges made against Dr. Yandell) refuse to entertain properly any accusations made against a member of their Body, if he came unchallenged from his State Medical Society. As soon as this was understood, it was determined that the charges intended for presentation at the American Medical Association, should be presented against Dr. Yandell, during the meeting of the Kentucky State Medical Association in April, 1872. These charges were then and there made.

By reference to the published Transactions in this number, it will be seen how the accused and guilty member escaped; by a violation of the Constitution of the State Medical Society. The President of that Body ruled that the charges were not proper for its consideration, as the matter was local only in character, and he was sustained by a sufficient number to enable the accused to escape the speedy trial and condign disgrace which awaited him; the accused himself, in violation of every instinct which usually guides the honest and upright, voting for his own escape. Most of those with clear brain and a proper appreciation of right, law and justice, soon saw that this ruling of the President of the State Society was illegal and unconstitutional. Still, it served the purpose, and the accused accepted the opportunity for escape. Himself and his friends, however, will feel the absurdity and ridiculousness of their position, when they read the following manly and most praiseworthy letter. Like all men, Dr. Wise has not been free

from official error; but unlike most men, he has had the courage and honesty to publicly confess that he has committed a serious wrong. Now that their leader, whom Dr. Yandell and his friends so joyously followed, has admitted bravely and openly his demonstrable error, who can fail to realize and ridicule the foolish appearance of those who have been left convicted of their illegal and unconstitutional action? Their position is certainly laughable indeed. They sacrificed their sense of justice and law to sustain the Chair (it seems always so well to do this) and now the Chair demonstrates the illegality and injustice of their act. Those who violated the Constitution and those who are so constituted as to have been afraid to sustain the Constitution, will feel when they read this letter, that their public position is so illegal and deplorable as to defy description. The following letter places them in a position most unenviable and unfortunate, and they deserve richly all of the ridicule and satire which this letter must inevitably entail upon them.

It would be well to illustrate the unfortunate, censurable, and damaging position of those who, in an ostensible support of a presiding officer, stand really before the public as those outraging the law, for the protection of one who has demonstrably violated it; but illustration is impracticable; to the credit and glory of history, the record shows that it furnishes no precedent and offers no actual parallel. It is unquestionable that some good men acted with bad judgment and under misapprehension, but it is also unquestionable that many members acted with a correct apprehension of the premises, but with a desperate determination to outrage the law for the accomplishment of their unlawful purpose. They deserve no mercy, and the public will give them none. Here is the letter:

COVINGTON, KY., April 16, 1872.

Dr. E. S. Gaillard:

Dear Sir,--Since my return home, I have reflected seriously on the late proceedings of our State Medical Society, and more particularly on that part of the proceedings in connection with

the charges preferred, by you, against Dr. David W. Yandell, of your city. I feel that I made a serious error in my ruling on that occasion, and I will not make the greater error of hesitating to confess this to you, and through you to the public; for I desire this letter to be published.

I see now that my error was two-fold; in the first place, in not demanding an inviolable observance of the Constitution, which requires that all accused members of the State Medical Association should be tried by that Body; and, in the next place, by declaring the question at issue to be a local matter, when it appertains to the Chief Medical officer of the Chief Medical Association in America; an Association ramifying into and affecting every Medical Society in this country. A question having such relations to the medical public, cannot properly be termed a "local matter."

I have erred, and I will do myself the justice of publicly confessing my error.

Had the party accused, and his friends, demanded an investigation of the very serious charges made, and had they not resisted all efforts to place your charges before the jury constitutionally provided, this, my error of the moment, could not have occurred. My duty requires me to write this letter, and I have endeavored to promptly perform it.

Very truly yours,

T. N. Wise,

Late President of the Kentucky State Medical Society.

The manliness of this letter is beyond praise; it does great credit to the head and heart, to the honor and honesty of its author. It leaves Dr. Yandell, however, in a most deplorable position; in the position of one who has voted to outrage a constitution to save himself from a punishment that was imminent and inevitable; in the position of one officially censured and condemned, for evading the legal disposition of charges which any true and honorable man would have immovably insisted on having fully and promptly investigated.

The President of the American Medical Association has been

publicly and constitutionally charged in the chief Medical Society of his State with repeated falsehoods; literary thefts; personal, official, and professional perfidy; obtaining place and emolument under false pretenses; conniving at fraud and outraging medical law. He has shrunk from an investigation of such charges; more than this, he has voted to evade their investigation, and has violated, by his vote, the Constitution of the Society in order to escape a trial which any honorable man would have imperatively demanded.

He goes unconvicted, it is true, to Philadelphia, but he goes as one whose occupancy of the Presidential chair of the American Medical Association must affix upon it a stain which time can never erase; a stain which must ever hereafter humiliate, if it does not disband, the members of that representative and honorable Body.

EDITORIAL BREVITIES.

The meeting of the Kentucky State Medical Society was pleasant, and to some extent useful. Two or three of the papers read were excellent. The remainder were almost valueless; compilations, rhetorical compositions, untenable and pointless theories, etc. The usual routine of thanking everybody for reading anything was observed, rendering thus valuable compliments to really deserving essayists impossible. It is to be hoped that the Publishing Committee will prove itself a first-class winnowing machine; separating the true grain and expelling the useless chaff. The failure of the excellent motion of Dr. Edward Richardson, pledging the Society to the observance of the code of ethics, was ominous and remarkable. Such evasions of corporate obligations seriously imperil the existence of societies. Dr. Keller's proposed amendments to the Constitution are judicious and very necessary. The motion of Dr. Chipley to so change the Constitution as to prevent the trial of a member until he has been tried by a subordinate Society, is remarkable. Any demagogue at home may violate and outrage all medical laws, and, by a little local influence, not only escape trial at home, but summary and just impalement in the State

Society whose laws he sets at defiance!! When the State Society refuses to try its own members, it is safe to say that it will either be justly destroyed or it will become a disreputable shield and weapon for disreputable men. It is far more necessary to so amend the Constitution as to make its repudiation or violation for the protection of the guilty and accused a penal offense; subjecting all who thus violate the Constitution to suspension or expulsion. The banquet, however, was like oil upon the troubled waters. The cardiac plexus responded so charmingly and so sympathetically to the genial agencies which brought balm and joy and peace to its great solar neighbor, that the effect was charming indeed. It was truly a love-feast memorable and surprising; the confessions, and the forgivenesses, the refraternizations, etc., etc., were complete and touching. Well might the astonished member from the country, as he gazed upon the last scene, be surprised at the pleasing harmony of the brethren in Louisville, and exclaim, in the language of Suwarrow, "peace reigns in Warsaw." It was right, then, to introduce this subject, by saying "the meeting of the Kentucky State Medical Society was pleasant and useful." ———In the last number of this Journal it was stated that Dr. James Cowling had operated for ovariotomy; this was an error; it was Dr. R. O. Cowling who operated. ——— A deep and earnest interest in the success of Southern journals has induced some, perhaps unwelcome, strictures in regard to them. No one has, as often as the writer, appealed in editorials and various other ways to the Profession to support these journals; and the same earnest interest in them which has induced these appeals has also induced serious comment, when anything has been conspicuously manifested to impair the respect of the public for these works. When the same means resorted to to dispose of patent razor-straps, hones, patent medicines, etc., are used to induce a sale of medical journals, it is difficult for those really interested to remain silent; testimonials, boasting, self-laudation, etc., will always be censured by those who feel a deep regret at such manifestations. When

the nurses of a baby just born claim for it the vigor, resources, and power of adult life; when the guardians of a child which has several times endured (from a peculiar asphyxia) the horrors of suspended life, claim for this child a special soundness of constitution; when over another existence consulting physisians have been repeatedly summoned, and the actual attendants dismissed or changed; and when still another is so far gone as to be begging for the operation of transfusion, one can not learn such facts without a feeling of regret and a word of censure. But when (to abandon the allegory) such have been the facts in regard to medical journals noisy in self-laudations, deceiving, in their claims, none but themselves, one must be totally uninterested in such works, their managers and supporters not to openly lament these published boastings, these egotistical self-laudations that are indeed so lamentable. Therefore, the truest friends to several Southern medical journals really aid them by condemning their public course. The privilege is a reciprocal one; let it be exercised in good faith, and good must be the result.———Dr. S. W. Butler, of Philadelphia, is publishing for Dr. J. M. Toner, of Washington, D. C., an American Directory of the Physicians of the United States. Physicians desiring their names to be entered, can be gratified by addressing the author or publisher. Dr. Toner desires to make this Directory complete. All physicians should send on their names. If this is done, give name in full; address; and place of graduation in literary and medical college; offices, civic, military, and professional held, etc.———The State Medical Societies of Georgia, Alabama, and Mississippi have recently held their annual meetings. Details unimportant. It is said by eye-witnesses that the Mobile Medical College Faculty so manipulated the Alabama State Medical Society as to disgust most of the respectable delegates present, and cause them to repudiate the Society. Abstracts of proceedings will be published.

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ART. I.—BONY TUMOR—OVARIOTOMY. By C. B. NOTTINGHAM, M. D., Macon, Ga. [Read before the Georgia State Medical Association at Columbus, Ga., April, 1872.

Lucretia Hogan, aged twenty-three years, married, no children, came under my care for uterine hæmorrhage in August, 1869. I was informed that she had been flowing continuously, but not freely, for about three months.

Exploration, digital and specular, revealed a uterus natural in situation and condition; no dislocation, erosion, inflammation or engorgement, and the sound penetrating without difficulty two and three-quarter inches. Examination trhough the walls of the abdomen discovered low down in the right side a firm, painless, movable tumor of the size of a turkey egg—*diagnosed ovarian.* Medication for some weeks with iodine locally and gallic acid, ergot, iron, etc., internally having failed to diminish the size of the tumor or to abate the hæmorrhage, she passed from under my observation.

About midsummer, 1870, I again saw her, and learned that the discharge had been almost constant. The tumor had enlarged very perceptibly. Her general health was impaired; she had pain in lower abdomen and right hip, with frequent

desire to empty the bladder. I advised anodynes, a generous diet, and suggested that if the tumor continued to enlarge, with unabated hæmorrhage, that extirpation of the morbid growth would be necessary.

In the spring of 1871 she again fell into my hands, when I found the tumor had grown more rapidly, and was now about the size of an infant's head, still painless, of bony hardness, quite movable, and projected low down in the pelvis, encroaching on the vagina. The hæmorrhage was about as when I last examined her. Scarcely a day passed without more or less of it. Her general health was now quite broken; reduced in flesh and unable to work at her business, that of a washerwoman, and incapable of walking any considerable distance in consequence of pain in her side and hip, and constant disposition to micturate. Believing the time had arrived when ovariotomy was justifiable and necessary, I so advised her. To both her and her husband I made a frank and full explanation of the dangers attending the operation. She desired it performed, and her husband assented. Learning that Drs. Magruder and Burgess had seen the case, I invited them to see her with me. They did so, and a free interchange of views resulted in concurrence of opinion that the tumor should be extirpated. Some domestic arrangements found necessary to be made and a long spell of rainy weather postponed the operation until the 6th day of June.

On the 3d I directed that the patient should take a brisk dose of castor oil, and after its action, to subsist on soft-boiled eggs, beef tea, toast, and crackers. Tuesday the 6th, one hour after she had taken a forty-drop dose of laudanum, in the presence of Drs. Magruder, Burgess, Hammond, Green, Holt, Wright, and Baxter, the patient having been brought fully under the influence of mixed chloroform and washed ether, I made an incision of the linea-alba between the umbilicus and pubis, four and a half inches long, down to the sheath of the recti muscles. The blood from this cut having been sponged, and waiting until all oozing had subsided, the sheath was

opened, the muscles separated, and seeing there was no hæmorrhage, I dipped my fingers and instruments into a bowl of warm artificial serum, and then cautiously pricked the peritoneum, and introducing a grooved staff, laid the membrane open to the extent of the wound of the integuments. No blood entered the abdomen, and the tumor at once presented in the form of an oblong, compact, bony mass. Searching again with sound and fingers moistened with the artificial serum for adhesion, and finding none, the mass was lifted out with tenaculum aided by the hand. The pedicle embraced the entire right broad ligament, and through it ran three blood vessels of large size; the tissue intervening between these vessels being but little, if at all, thickened. The right fallopian tube was seen running up on the side of the tumor. The pedicle being too short to admit of the application of the clamp without imprudent traction, I transfixed it with a double ligature composed of four strands of saddlers' silk, tied either half separately, and then encircled the whole. Leaving it half an inch above point of constriction, the ligatures were cut short, and the stump allowed to drop back into the pelvis. Examination discovering a normal left ovary, and no blood in the abdominal or pelvic cavities; the wound was closed with six sutures of silk. Each one was entered from within, just through the edge of the peritoneum, and brought out a full inch from the line of incision; a compress of wet lint was applied, and a flannel roller adjusted. As soon as the patient aroused from the anæsthetic, one-third of a grain of morphine was administered by hypodermic injection; a gum catheter was introduced and secured in her bladder, and she was put to bed at 1½ o'clock, looking quite pale; respiration 16, and pulse 68. At 2 o'clock there had been no nausea, and as the surface continued cool and pale, and there being considerable pain in the region of the wound, I gave by the mouth one grain of morphine with half an ounce of whiskey. Ice was directed in moderate quantity, and a tablespoonful of beef tea every hour. 11½ o'clock has slept some; general reäction satisfactory; complexion improved; sur-

face warm; pulse 74; respiration 18; expression of face good. Gave her half a grain of morphine, and ordered the same quantity every eight hours; one ounce of beef tea every two hours, and ice ad libitum. This treatment was continued until the evening of the third day, when her pulse suddenly ran up to 104; her respiration to 24; there was much thirst, with some rumbling in the bowels, slight tympany and increased soreness and pain in lower abdomen. Apprehensive of incipient peritonitis, I suspended the morphine, and ordered two grains gum opium every two hours, until she should become impressed with it, and then the same quantity every five hours. Flannels wrung out of warm water were directed to be kept constantly applied over the abdomen. She took the opium every two hours, until six doses had been taken, when the interval was lengthened to four hours. *This*, with the warm stupes, beef tea, and toast as nourishment, with ice at her pleasure, was continued with satisfactory results until 12 o'clock of the fifth day, when her condition gave promise of doing well in every respect. The sutures were now taken out, and strips of adhesive plaster applied. The wound was found adherent in its whole length. The catheter was removed, and came out clean; the stupes were suspended; the interval between doses of opium was lengthed to six hours. Soft-boiled eggs were added to diet. Case continued to progress favorably. The policy of introducing the catheter in the evening and allowing it to remain through the night was pursued until the eighth day, when urine was voided by voluntary effort. The opium was continued two days longer, at intervals of eight hours, when it was suspended. Beef-steak and batter-cakes improved her dietary.

On the tenth day from the operation, and the thirteenth from the last alvine evacuation, her bowels were moved by an enema of warm soapsuds. This was repeated two days afterwards. From this time she had, daily, two stools without the intervention of remedy; ate heartily; gained strength, and began to sit up on the fifteenth day, though I continued to look after

her until the twenty-second day, when she was discharged quite well.

The case is, I apprehend, of some interest in several points of view.

1st. The tumor was of a kind that is rarely seen originating and developed in the ovary. Enclosed in tegumentary envelope, it was almost entirely bone, there being here and there only a slight intermixture of fibrous substance. Its osseous nature was so decided that a strong knife could not be made to penetrate it at any point. To open it for inspection, a saw had to be brought into requisition. Its weight, when drained of blood, was one and three-quarter pounds. Neither teeth nor hair was observed in any portion of it.

2d. As the best method of dealing with the pedicle when it is too short for the clamp is not yet settled among operators, the result in this case strengthens the policy of cutting short the ligature and dropping it back into the pelvis.

3d. Peritonitis from violence to the membrane during the operation "proves to be the cause of death in about one quarter of all who die." In this case the symptoms of inflammation were quite threatening on the evening of the third day. They were promptly met with flannel stupes and opium, given with a liberal hand, *and with nothing else.* The good effects of the opium treatment were speedily manifested, and proved highly satisfactory.

4th. The success of the operation in relieving the condition for which it was resorted to has been complete. The hæmorrhage that was gradually but steadily and surely destroying her life continued very sparingly for two days after the tumor was removed, when for a few hours becoming very dark (almost black) it entirely subsided. There was no return of it. Thirty days after its cessation, 8th of July, the menses appeared; natural in every respect. Since then she has been quite regular up to this writing, 1st April, 1872.

ART. II.—CASE OF ASTHENIC PNEUMONIA.—BENEFICIAL EFFECTS OF HYDRATE OF CHLORAL. By F. E. WILSON, M. D., of Dove's Depot, Darlington County, S. C.

Was called on the afternoon of February 28th, 1872, to see J. B., a young, active farmer, who was attacked two days previous with a chill, followed by high fever, pain in the side, cough, in short, all the symptoms of acute pneumonia. On my arrival, his mother stated that, before sending for me, she had been alarmed by a profuse bleeding from the nose, and rather free action on the bowels of a dose of castor oil she had administered in the morning. I found the young man breathing quick and short, pulse 130, coughing almost incessantly, complaining of acute pains in the right side, expectoration bloody, bowels acting freely.

℞—Opium, pulv. digitalis aa grs. iv., pulv. ipecac grs. ij. M. et div. chart. No. viij. One every three hours, with a mixture of acet. potass., spirits nitre dulc., and syrup of squills to be taken after each dose of the powders.

February 29.—Spent a restless night, fever high, cough almost incessant and painful. Continue powders, and substitute nit. potass. for the acetate in the cough mixture.

March 1.—Had a restless night, much incoherent talking; pulse 140, rather weak; expectoration very bloody; cough causes much pain; tongue dry. The symptoms now assuming a decidedly asthenic character; the epistaxis continuing from day to day. Left out the digitalis and prescribed—℞. Opium grs. v., camphor grs. x., mur. ammonia grs. viij. M. et div. chart. No. v. One every four hours, with one tablespoonful of whisky in water every two hours. Substituted the chlorate of potass. for the nitrate, in the cough mixture.

March 2.—Delirium more decided and noisy; pulse weak; tongue dry. Blister to the chest, and continue treatment.

March 3.—Patient wildly delirious; has had no sleep for several days and nights; blisters behind ears; hair to be cut off. ℞. Sulph. morphia gr. i., camphor grs. x., musk grs. iv. M. et divid. chart. No. 4. One every two hours; egg-nog to

be freely given. As a cough mixture, the mur. ammonia in solution with syr. squills and senega. Three P. M., the patient seeming not disposed to sleep, administered, hypodermically, ¼ gr. morphia in each arm, allowing one hour to intervene. This brought on two or three hours of sleep, which I hoped would materially improve his condition.

March 4.—Patient had a bad night (notwithstanding the few hours sleep induced by the hypodermic use of morphia the previous afternoon), became almost unmanageable, tried to fight his attendants, tearing his bed clothes, etc. Scarified—cups to the side.

℞. Hyd. Chloral, ℈ij.;
Aqua, ℥i.

Sig.—Two teaspoonsful in half glass of water every three hours.

This had the desired effect; slept well for several hours, waking perfectly rational, and all the symptoms improving.

March 5. Requested Dr. P. E. Griffin, of Society Hill, to see the case with me. Found the patient much better; the Doctor agreeing with me in diagnosis, and approving my treatment throughout. Ordered continuation of the chloral.

March 6.—Patient steadily improving.

March 7—Discharged the case, the patient convalescing rapidly.

Remarks.—In this case, without the chloral, the man would certainly have perished, as the ordinary treatment by opium and stimulants failed to induce the sleep which he so much needed. I regretted I had not used it sooner; but I hoped the frequent doses of morphine he had been taking would quiet him and bring about the desired result, and my experience with the chloral was limited, having used it in a few cases only previous to this. This accounts for the caution I observed in its use, giving only *ten grains* every three hours. I have never given more than *twenty grains* for one dose, repeating in three hours, if necessary; and, indeed, in these moderate doses I have found the beneficial effects of the drug sufficient to bring about the de-

sired end. In *five* and *ten-grain* doses, I have found it a pleasant sedative in febrile diseases with nervous excitement and sleeplessness. In regard to its beneficial effects in the above case, I would say that I have had in my practice many such cases, and have always found the *excited, restless delirium* of pneumonia, of typhoid fever, or the same symptom occurring in any other febrile disease, *very hard* to relieve. Here I find the chloral (in my short experience in its use) acting like a charm, subduing the most excited delirium where opium (its alkaloid morphia), henbane, camphor, bromide potassium, and other anodynes and hypnotics, fail entirely.

ART. III.—RARE CASE IN OBSTETRICS. By HARRIS FISHER, M. D., Dublin, Ga.

About a year since I was called to the wife of a freedman, who had been in labor, according to his account, twenty-four hours without successful issue. Upon the usual digital examination, I found a smooth, firm presenting body with a central aperture, unmistakably of the sphincter class. But for the firmness, I should have diagnosed it a breach presentation. Upon more deliberation I recognized the hairy scalp of a fœtus through the opening, at this time about the size of an American quarter-dollar. As the woman lay upon a pallet in front of a cabin fire, I exposed her person to the light, and, separating the labia, recognized a prolapsed womb pressing firmly against the soft parts, the os uteri dilated as mentioned above.

In a miscellaneous practice of fifteen years, I have not met with anything like this before, nor has it been observed in reading the experience of others.

The head of the child had traversed nearly the entire extent of the pelvic cavity, and delivery was only postponed by the unyielding os.

When did this prolapsus occur? As the child's head came

with the womb, it must have progressed with the labor, by the slow processes of abdominal and diaphragmatic expulsion. This woman was the subject of habitual prolapsus (as I happened to know) before she became pregnant; of course as gestation advanced the womb arose to the more spacious abdomen.

The pains were vigorous, the os thin and unyielding. Here, I thought, was a rare opportunity to test the generally-acknowledged dilating properties of belladonna. I had often attempted the application of the extract to the rigid os uteri high up in its proper place, and after much smearing along the vaginal tract, bunglingly succeeded in conveying a very small portion there; but here it was in full view, and I mopped the retentive orifice thoroughly with Tilden's alcoholic extract. This, with the use of lobelia in infusion to the production of frequent vomiting, succeeded in four or five hours in overcoming the rigidity, and in two or three more, the delivery was accomplished; and both mother and child did well.

If any of the readers, or any of the editorial corps of the Journal, will give their observations on this anomaly of parturition, it will be highly appreciated by myself, and perhaps by many others.

ART. IV.—CASE OF ACCIDENTAL POISONING BY CROTON OIL.

By G. H. SNEAD, M. D., Fluvanna County, Va.

Mrs. S., primapara, was delivered of a healthy child after a somewhat tedious labor on —— July. The patient was doing remarkably well up to the third morning after delivery, when a dose of castor oil was ordered by her physician, Dr. Winn. Her husband, through mistake, gave her over *two teaspoonsful of croton oil,* mixed with two parts of sweet oil. Soon after swallowing it, the patient complained of a violent burning sensation in the stomach and bowels, and in a short time rapid and drastic purgation ensued. Nurse at once administered sweet milk, which relieved, to some extent, the

burning. When seen by her physicians, Drs. Winn and Snead, two hours after the accident, her pulse was beating 150 to the minute and scarcely perceptible; the entire surface was bathed in a cold, clammy sweat; her countenance sunken, with copious watery choleraic dejections, every few moments. Administered gum arabic water freely, and afterwards white of egg every hour; also 25 drops of laudanum every half hour till 75 drops had been taken. At 12 o'clock M., six hours after the taking of the oil, the bowels moving incessantly, pulse 160 and sinking, skin deathly cold, and physiognomy betraying great nervous prostration. Continued mucilaginous drinks and white of egg, also gave ¼ grain of opium and 2 grains acetate lead every two hours. Three o'clock P. M., vomiting of dark greenish matter, pulse quivering, and skin intensely cold. Thinking it unsafe to withhold stimulants longer, commenced by giving brandy in the form of egg-nog (to shield the stomach as much as possible from the irritating properties of the alcohol) every half hour. Pulse responded promptly to its use, and always flagging when stimulants were suspended beyond the usual time. Twelve o'clock at night, pulse 160 and very feeble, complexion livid, bowels still unchecked. Stimulants freely administered, mustard sinapisms covering extremities and stomach, friction over surface.

Second day, pulse same, bowels moved every half hour, mind clear, features contracted, lips purple, and surface cold. Twelve o'clock at night—bowels moved every half hour, pulse 150 and sinking, skin very cold and clammy, vomiting of dark greenish matter, picking at the bed clothes, and restless.

Third morning, 8 o'clock, Dr. Nelson called in; pulse 140, bowels checked, skin warmer, with vomiting lessened. Ordered lime water and milk; stimulants continued; applied blister plaster to stomach, rubefacients to extremities. Eight o'clock P. M.; skin more pleasant, vomiting relieved, pulse 120.

Fourth morning, skin much improved, bowels quiet, but little vomiting, physiognomy much more favorable, pulse 100.

Fifth morning, pulse 90, rested well, reäction thoroughly established.

Sixth morning, patient entirely comfortable, reäction well sustained, appetite returning, several healthy alvine evacuations during last twenty-hours. Patient recovered without any inflammation or any other injurious consequence, except the shedding of her finger and toe-nails almost entire, due to the suspension of vitality in the extremities during three days.

This case illustrates the importance of persevering, although the patient may seem to be in articulo-mortis. It is, indeed, certain that this patient was kept alive for thirty-six hours by artificial means, her attendants working and hoping against hope until the force of the terrible dose had spent itself upon the system.

ECLECTIC DEPARTMENT.

"Carpere et colligere."

ART. I.—SOME CLINICAL OBSERVATIONS ON THE MALIGNANT DISEASES OF THE UTERUS. By FORDYCE BARKER, M. D., Professor of Clinical Midwifery and Diseases of Women in Bellevue Hospital Medical College, Obstetric Physician to Bellevue Hospital, etc. [Transactions of the New York Academy of Medicine.]

I shall not discuss the pathology of the malignant diseases of the uterus. I can add nothing, on this point, of value to the papers of Drs. Noeggerath and Kammerer, recently read before the Academy; and the admirable analysis in résumé by Prof. William T. Lusk, in the September number of the "New York Medical Journal," brings the subject fully up to the present state of science. I shall confine myself, therefore, to a consideration of the clinical features of these diseases.

Frequency of these Diseases.—It is generally asserted that these diseases are more frequent in cities than in the country; but this has not been demonstrated by any statistics of value,

and Walsh,* basing his opinion on an analysis of the tables of Mr. Farr, Registrar-General of England, says: "Hence it appears that a town-life is far from exercising any serious influence on the production and mortality of cancer."

From the tables of the Registrar-General, Sir James Simpson† estimates the deaths in England (exclusive of London) from cancer of the uterus as about 3,000 from 1838 to 1842. M. Tanchou‡ found in the civil registers of the Department of Seine, that the deaths in this Department from cancer of the uterus were as follows:

In 1830	351
" 1831	391
" 1832	396
" 1833	398
" 1834	436
" 1835	508
Total in six years	2,480

My friend, Dr. Harris, Sanitary Superintendent of the Metropolitan Board of Health, has kindly furnished for me, from the mortuary records of the city of New York, statistics showing the amount of mortality from malignant and other organic diseases of the uterus and ovaries from 1804 to October 1, 1869, sixty-five and three-quarter years. I shall append the tables and a letter from Dr. Harris to this paper. From the tables it will be seen that the reported deaths from cancer of the uterus during the ten years ending December 31, 1865, were 431. The deaths during 1866, 1867, 1868, and first nine months of 1869, were 298. The yearly average of deaths from cancer of the uterus in this city during the last three and three-quarter years has been 79, while the average in the previous ten years was only 43 per annum. Thus, in fourteen years, there have been 729 deaths in this city from cancer of the uterus.

In fifty-one years, that is, from 1804 to 1855, the registered deaths from cancer of the uterus in the city of New York were

* Walsh, On Cancer, p. 111. Boston. 1844.

† On Diseases of Women, p. 42. Philadelphia. 1863.

‡ Recherches sur le traitement médical des tumeurs de sein. Paris. 1844.

only 247; but no case of death from cancer of the uterus was registered until 1837, and 247 would then represent the number of recorded deaths from this cause in eighteen years, or an annual average of little more than 13. These statistics would seem to show that this disease is rapidly on the increase in this city. In a note to me, Dr. Harris says: "It cannot be true that there has been such a tremendous increase in the number of fatal diseases of the womb, which are registered as cancer, as these three masses of the statistics would seem to indicate, even with liberal allowance for rapid increase of population. Permit me, therefore, to call attention to the fact that, since the Metropolitan Board of Health organized improved methods of inquiry and registry, we record no deaths from asthenia, debility, shocks, hæmorrhage, unexplained tumor, and other indefinite terms. Hence we find some increase in the accurately diagnosticated cancers of the uterus, and a like increase in several other organic and dyscrasic causes of death." Dr. Harris adds: "Yet I must confess that, after a very careful analysis of the variable elements in the mortality records of the past sixty-five years, I am compelled to believe that malignant diseases of the uterus and ovaries are increasing far more rapidly than other dyscrasic and organic causes of death in women." It may be true, as Dr. Harris supposes, that cancer of the uterus is becoming more frequent in this city, but I should place very little reliance on these statistics as proof of the fact. How often is the question put to every practising physician, "Is not Bright's disease a great deal more common than in former times?" I have no doubt that the mortuary records of the city of New York would show a very much more rapid increase of this disease during the last thirty years than of cancer of the uterus, and for similar reasons, the deaths from Bright's disease having been formerly reported as resulting from apoplexy, convulsions, dropsy, etc. It needs no argument to prove that progress in the facility and certainty of diagnosis demonstrates the more frequent existence of a disease.

I think every one must be struck with the remarkable con-

trast between the mortality from cancer of the uterus in Paris and in New York, the population of Paris, from 1830 to 1835, being about the same as that of New York from 1865 to 1870; the average annual mortality from this cause being in one city 413, and in the other 79. This wonderful difference cannot be explained by any marked difference in the climate, habits, or morals of the two cities, or any other known cause, so far as we are acquainted with the laws of development of cancer. Is it possible that the great mass of the Profession in one city is so much in advance in the diagnosis of the disease, as compared with the Profession in the other city, as to explain the difference? I cannot regard this as probable. Is it a question of race? Cancer is said to be especially a disease of civilization, and more frequent in the cities than in the country. But this has not been proven by accurate statistics, and my own observation and study of the subject would lead me to hesitate in accepting these assertions. Cancer is also said to be much more frequent in temperate than in warm climates, but I cannot find that this belief rests on any definite statistical foundation.

Comparative Exemption of the African Race.—I have recently learned some facts which seem to show that cancer of the uterus is comparatively rare in the African race. This idea was first suggested to me by my friend, Dr. Whitall, Resident-Physician of the Colored Home in this City. In the five years that he has been connected with the Home, during which time about two thousand colored women have been under his immediate observation, he has seen malignant disease of the uterus but twice.*

I also learn from my friends, Dr. J. C. Nott and Dr. Marion Sims, both of whom have had large opportunities for observation, that this disease is met with much less frequently "among the blacks than in the whites," and this opinion is confirmed by some interesting statistics kindly obtained for me by Dr. Nott,

* Vid. Appendix. Letters of Drs. Whitall, Nott, Chisholm, and Gilmore.

in a letter from Professor Chisolm, late of Charleston, now of Baltimore.

Etiology.—I think that the belief is very general, both with the Profession and the public, that cancer is eminently an hereditary disease. Early in my professional life my attention was strongly directed to this point, by the pathetic question put to me by a great sufferer from uterine cancer, "Are my daughters likely to go through with the same terrible experience?" I have often since that time been called upon to answer questions of similar import. Nearly all of the recent writers on cancer of the uterus give marked prominence to hereditary influence as a predisposing cause of the disease.

The attempt to establish general laws in pathology from statistics is extremely fallacious, except when based on very large numbers, and unfortunately, up to the present time, the statistics accumulated on the point are too few to warrant a conclusive decision. Lebert* found evidence of hereditary tendency in 14 cases out of 102. Paget† found in 322 cancerous patients there were 78, or nearly one-fourth, who were aware of cancer in other members of their families. Sibley,‡ 33 in 305 cases.

Lebert,	14 in 102,	or 13.7 per cent., 1 in 7.
Paget,	78 in 322,	or 24.2 per cent., I in 4
Sibley,	33 in 305,	or 8.5 per cent., 1 in 9.

Statistics bearing on this question, in connection with uterine cancer, are much smaller in numbers. Since September, 1853, I have recorded the result of my inquiry on this point in every case of malignant disease of the uterus that has come under my observation. I should say that a large majority of these cases, from which my tables are made up, I have seen and examined but once. Hereditary influence was noted whenever any relative of a former generation, as either parent, uncle or aunt, grand-parent, or brother or sister of grand-parent, was known to have had malignant disease in any form. It is possible that

* Maladies Cancereuses, p. 218.
† Surg. Path. Third Am. Ed., p. 674.
‡ Medico-Chirurgical Transactions, vol. 42.

it may have occurred in some relative, when the fact was not known to the patient; but this would not seem very probable in a disease of such a marked and fearful character as this. I have found, in 487 cases of uterine cancer, some relative of a former generation reported to have had some form of malignant disease in 36. In cancer of the uterus, a comparison on this point with the statistics of others will stand as follows:

Lebert,	2 in 13, or 1 in 6.5.	15.4 per cent.
West,	7 in 44, or 1 in 6.2.	15.6 per cent.
Sibley,	8 in 135, or 1 in 16.8.	5.9 per cent.
Scanzoni,	9 in 34, or 1 in 3.8.	26.4 per cent.
Barker,	36 in 487, or 1 in 13.5.	7.3 per cent.

If those statistics prove anything, they seem to show that the disease is hereditary in but a very small minority of cases. In fact, they do not prove it to be hereditary at all. A constitutional tendency to the development of the disease (a cancerous diathesis) undoubtedly often exists in those whose ancestry have been entirely exempt from the disease.

In one family bearing an historical name, in which neither cancer nor phthisis has been known to occur in any branch of the family in a former generation, either on the father's or the mother's side, the father and the mother now living at nearly eighty years of age, I have attended two sisters who died from cancer of the breast; and from a third sister, who is living, apparently in excellent health, I removed, three years ago, a cauliflower excrescence of the os uteri. I have now under my care a lady with a cancer of the uterus, the second wife of a gentleman whose first wife, a sister of the second, died from the same disease sixteen years ago. Another sister has at the present time a very suspicious lump in the breast. The father and mother of these ladies are now living, and no member of the family in a former generation has been known to die from cancer. Two aunts have died from phthisis. Now, in both of these families there is manifestly a constitutional predisposition to cancer, but the disease was not inherited, as it did not exist in former generations.

In my examination of patients, I was struck with the num-

ber who reported that consumption was in the family, and since 1860 I have kept a record on this point also. In 372 cases of uterine cancer, phthisis was reported to exist in the families of 92. It is only recently that I have been able to obtain, through the kindness of Dr. Purple, the volume of the "Medico-Chirurgical Transactions" containing the statistics of Mr. Sibley, gathered from the cancer records of Middlesex Hospital, London, of cases treated during the years 1853, '54, '55, and '56. Mr. Sibley says: "It is noted in 130 cases whether phthisis existed or not in the family of the patient. The question was answered in the affirmative in 48 instances. Comparing the statistics, they will stand as follows: Phthisis has existed in the family of those having cancer—

Sibley, 48 cases in 130. 1 in 2.7. 36.9 per cent.
Barker, 92 cases in 372. 1 in 4, nearly. 24.7 per cent.

Now, to my mind, all that these statistics prove is, that a vitiated constitution—a diathesis, whether it be inherited or acquired, whether it be tuberculous or cancerous, may predispose to the development of cancer. All the other causes which authors have assigned as predisposing to this disease, amount to just this and no more. I should say, then, nothing is known in regard to the *etiology* of this disease, as science up to the present time utterly fails to explain what are the causes of this special form of heteromorphous development. I shall add, there is no evidence that the *disease* is, in any proper use of the term, *hereditary*. The *diathesis* is, undoubtedly, often inherited. But it does not follow that the child of a parent who has died from cancer necessarily or even generally inherits the diathesis; for both the diathesis and the disease of the parent may have been acquired subsequent to the conception and the birth of the child.*

* The "Biennial Retrospect of Medicine and Surgery," for 1865--6, published by the New Sydenham Society (p. 228), refers to a paper in the "British Medical Journal," August 26, 1865, "On the Antecedents of Cancer," by Mr. Moore. "Mr. Moore questions the hereditary nature of the cancer. He does not deny to parental influence some effects of its production, but he ad-

Classification of Malignant Diseases of the Uterus.—I must again refer to the paper of Dr. Lusk,* as giving the most complete "rêsumé" of the present state of science on this point. Formerly scirrhus was regarded as the most frequent form in which this disease is met with in the uterus; but it is now known to be one of the rarest. The colloid form is also very rare. I have seen only one in which the character was determined by an autopsy and an examination of the diseased structure with the microscope. In another case, which I saw with Dr. Linsly and Dr. Buck, I feel a strong conviction that the colloid form of disease existed, but there was no opportunity for verification of the diagnosis by an autopsic and microscopic examination. I have always accepted the distinction which has been made between cancer and cancroid disease of the uterus, and my record of the comparative frequency of these forms—the diagnosis being based entirely on the clinical aspect of these cases—is as follows:

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duces facts to prove that hereditary transmission is rarely noticed compared to the total number of cases; a direct transmission of the disease from parent to child being traceable only about thrice in a hundred cases. The bearing of the facts of both similar and dissimilar cancers occurring in parents and offspring is discussed; and, as an argument against the hereditary theory, it is noticed that cancer is least common at the period of life when parental influence is most active—i. e., in infancy. So, also, in infants born while the mother is suffering from cancer, the disease is not transmitted, nor, in families born from a cancerous mother, is it the younger children who are peculiarly liable.

"It usually attacks persons who have been all their lives in robust health; and if death happens from any accidental cause in the early period of cancer, all the organs of the body are generally found healthy; and at a later period of the disease the secondary deposits are found scattered in organs otherwise quite healthy. Cancer patients are also very commonly born of parents who have been healthy and lived to extreme old age. A table is given to show that it is often observed that cancer occurs in the earliest children of large families, who are personally the most vigorous. On the whole, Mr. Moore concludes that there is no proof of a more peculiar hereditary nature in cancer than in other affections, such as malformations etc., which are obviously not constitutional."

* Vide "N. Y. Med. Journal," Sept. 1869.

Cancer of the uterus	487
Cauliflower excrescence	18
Corroding ulcer	6
Recurrent fibroid	3

I am not yet prepared to accept the statement, that the "idea of basing a distinction between cancer and cancroid in the uterus upon differences of malignancy is highly erroneous." It seems to me a very important fact, which both Klob and Paget have asserted, that cauliflower excrescence may exist primarily for some time as a harmless papillary growth, and subsequently assume the characteristics of malignancy. I think, clinically speaking, there is a great difference as to the comparative malignancy of the two forms: the malignancy of the one being wholly local for a time, and very slowly poisoning the general system; while that of the other very rapidly infects the whole system. I think the proof is now abundant and unquestionable that the locally malignant form, or cancroid, is often extirpated, and when wholly removed does not recur. But in cancer this fortunate result occurs so very rarely as to be purely exceptional. I shall again refer to this point in connection with the subject of treatment.

Symptoms.—The symptoms occurring in malignant diseases of the uterus have been so fully described by authors, that I should be needlessly occupying the time of the Academy in giving a "résumé" of them. I propose merely to offer a few observations in regard to them. Vaginal discharges, pain, and hæmorrhage are the three most prominent and characteristic symptoms. But it may be stated, as a general rule, that the symptoms of the earlier stages of the disease are so slight as rarely to attract the attention of the patient, or at least not sufficient to lead her to seek medical aid until the disease has made considerable progress, unless some accidental circumstance may have led to a physical examination. In one patient the first symptom which attracted attention was the fact that the husband was alarmed by finding that an herpetic eruption on the penis always followed coition. This patient was unaware of the existence of any leucorrhœal discharge, and had never

suffered from pain or hæmorrhage. Another patient, aged 52, who had not menstruated for nine years, and who was entirely free from all symptoms of disease that she was aware of, was alarmed by observing that coition, which was not attended with pain, was always followed by a slight discharge of blood from the vagina. A third, who, as her husband informed me, had been cold and passionless to an unpleasant degree during menstrual life, three years after the climacteric, began to manifest a most extraordinary sexual appetite. It finally became so serious a matter for the husband, and so much a source of religious sorrow for the wife, that I was consulted. This patient had the appearance of perfect health, and she could not complain of a single symptom, except the one mentioned. But in this case, as in the other two referred to, a digital examination revealed the existence of advanced carcinoma.

The vaginal discharges are, no doubt, one of the first symptoms that attract the attention of a majority of patients. The characters of these discharges are so well known that it is needless for me to allude to them, except to say that none of them are pathognomonic of malignant disease, the various fœtid and sanguinolent discharges often occurring in non-malignant diseases of the uterus. Neither is there anything peculiar or characteristic in the odor of the discharges. The odor resulting from sphacelation of part of a fibroid, from strangulation of a polypus, from decomposition of a portion of retained ovum, and more emphatically from retention and decomposition of the secretions within the cavity of the uterus by the compressed sponge, is oftentimes quite as offensive and insupportable as the discharges from malignant diseases. Most authors agree with Becquerel in describing the pain of cancer as being very sharp, intense, and lancinating, and not influenced by locomotion or movement of any kind. In my experience, pain very rarely occurs as a prominent symptom, until the disease is far advanced; and in some cases, throughout the whole course of the disease, it never amounts to more than a general sense of *malaise* or pain in micturition or in defœcation. In some cases

there are frequently-recurring flashes of pain, darting from the pelvic region, but undefined as to locality, which often awaken the patient from a sound sleep. In a few cases, but in a *very small* minority, the pains in the advanced stages have been most atrocious, producing as intense agony as I have been called upon to see the human system endure.

In quite a number of cases I have been struck with the absence of all appearance of cachexiæ up to the time of death. In some of these cases death has resulted from hæmorrhage, as in a patient of Dr. Thebaud, who died from this cause away from the city, three years after the first manifestation of the disease. In others the death has resulted from secondary peritonitis, perhaps before the disease has poisoned the general system, by decomposition and septicæmic absorption.

Peritonitis occurs in a very large proportion of cases during the progress of the disease. In most cases that I have seen, the attacks have been partial and recurrent, but in some few the peritonitis has been general and the immediate cause of death. Congestion and inflammation of the urethra, bladder, and rectum, with their concomitant symptoms, are ordinarily developed in the advanced stages of the disease, even when the cancerous deposit does not extend to those organs. So, also, from this cause, in many cases, the ureters become partially or completely obstructed, producing partial or complete suppression of the urine. In the paper of Dr. Lusk, which I have before alluded to, he quotes Cornil as saying: "With these obstructions to the excretion of urine, we expected uræmic symptoms to be manifested, but they were not. Although the attention of M. Charot and myself was fixed upon this point, we never saw either the epileptiform convulsion or the coma peculiar to uræmic poisoning." Dr. Lusk also says that "Seyfert has been in the habit of employing this fact for years as an argument against the uræmic theory of eclampsia." In my experience two instances have occurred which do not coïncide with the above statement. In 1853 I several times saw, with the late Dr. Henry G. Cox, a patient in whom the cancerous deposit had extended from the

uterus to the vesico-vaginal and recto-vaginal walls. As I lived much nearer to the patient than Dr. Cox, I was called in the night to see her on account of an attack of convulsions, and found that no urine had been passed for nearly forty-eight hours. I introduced the catheter, but found no water in the bladder. During the night she had five convulsions. The tendency to convulsions seemed to be overcome by chloroform, and the next day the excretion of urine became abundant, and she lived more than a year after this occurrence.

In 1858 I saw several times, with Dr. Oliver White, a lady with extensive cancer involving the uterus and neighboring organs, who, during my attendance with Dr. White, had complete suppression of urine, accompanied with profound coma, which continued, as Dr. White informs me, nearly four days. In this case also I passed the catheter, but there was no water in the bladder. Suddenly a most enormous discharge of urine took place, and the patient gradually came out of the comatose state, and lived some weeks.

Diagnosis.—The diagnostic characters of the malignant diseases of the neck of the uterus are now so clearly given by authors, and so readily made out, that I have nothing to add on this point. I heartily concur with my friend, Prof. Thomas, in his statement that "for the proper defferentiation of true malignant disease from neoplasms and the results of inflammation we are indebted to no one so much as to Dr. Henry Bennet, of London."

But little, however, has been written on the diagnosis of uterine cancer where the cervix is not involved. In fact, until within a few years past, the cervix has been regarded as almost invariably the primary seat of the disease, and this belief has been sanctioned by the authority of Ramsbotham, Sir Charles Clarke, Walshe, and Rokitansky. But it is now known that it not unfrequently occurs primarily in the cavity or in the parenchyma of the body of the uterus. A very considerable number of cases of this kind have been reported. Sir James Simpson thinks that out of thirty cases of cancer of the uterus two are

of this kind. I have met with several, but by no means in so large a proportion as the estimate of Sir James Simpson. The primary seat of the disease may be either in the mucous membrane of the cavity or in the parenchyma of the body of the uterus. I will mention, as an illustration of the first form, the case of a lady in Williamsburg, from whom, in 1852, I removed a polypus which had its attachment in the cavity of the body of the uterus. She was then forty-five years of age, and from that time for six years she was in excellent health, having no vaginal discharge, either leucorrhœal or sanguineous. In the autumn of 1858 she again called upon me on account of constant sanious discharge with a slightly fœtid odor, and moderate hæmorrhage, which had twice occurred. The cervix uteri appeared perfectly healthy to the touch, and presented no abnormal appearance on examination with the speculum. Some months subsequently she again called upon me, as she had had several attacks of rather severe kæmorrhage. She looked sick; her countenance was pale and wrinkled, but she complained of no pain, only of weakness. I dilated the cervix by compressed sponge, when I could feel with my finger a small irregular mass, not larger than a filbert, which was easily torn by the nail, and bled profusely. I will not detail the various means that I resorted to to restrain and destroy this mass, as she died early in the summer of 1862. A recent case affords a most interesting example of that form of the disease where the primary seat of the cancerous deposit was in the parenchyma of the body of the uterus. A lady, mother of several children, ceased to menstruate in 1857, when she was forty-nine years of age. She had no vaginal discharge from this time until 1864, when she had a moderate hæmorrhage from the uterus, which then caused some alarm. Since that time there has been a constant leucorrhœal discharge. For four years past, this discharge has been frequently, although not constantly, sanious and fœtid. She has had several attacks of severe hæmorrhage, and two or three attacks of peritonitis. She has been under the professional care of Dr. Griswold, of this city, and Dr. Ed-

ward Parker, of Poughkeepsie. During the last two years she was repeatedly seen and most carefully examined by Drs. Peaslee and Noeggerath, and more recently by myself. The cervix uteri seemed unaffected by disease up to the time of her death, two weeks since. At the post-mortem examination made by Dr. Lusk—Drs. Griswold, Peaslee, and myself being present—a large amount of sero-purulent fluid was found in the peritoneal cavity, and in the region of the pelvis the intestines, bladder, and uterus were agglutinated in a mass difficult to separate or distinguish. The uterus was enlarged, and through the posterior wall there was a perforation by ulceration communicating with a circumscribed sac filled with pus, situate above the pubis, and extending down into the cul-de-sac of Douglas, where it again communicated with the cavity of the uterus, through an extensive loss of substance in the uterine walls, just above the junction of the cervix with the body. Dr. Francis Delafield has kindly made for me a microscopic examination of the uterus, and has given me the following report:

"The cervix is of usual length and size, its internal surface rough. The body of the uterus is increased in thickness, its internal surface rough and ulcerated, its posterior wall partly destroyed and communicating with a cavity between the uterus and rectum. The mucous membrane of the body is entirely destroyed. Its roughened, internal surface is composed of irregular pieces of muscular tissue and new growth, both fatty and granular. Beneath this, the muscular tissue is replaced by a tissue composed of the normal muscle, mixed with alveoli containing cells, and with masses of small, round, lymphoid cells. The walls of the alveoli are composed of muscle, of fibrous tissue, and of lymphoid cells. The cells contained in the alveoli are small, polygonal, with one or two nuclei, and have an epithelial character. These cells are nowhere very closely packed together, nor do they present any of the so-called nests. The infiltration of lymphoid cells is everywhere very abundant. The muscle-cells are increased in size and easily isolated. The infiltration of new growths extends entirely

through the posterior wall of the organ. In the walls of the cervix the same infiltration exists; but here the alveoli and epithelial cells are less abundant and the number of lymphoid cells greater. If we are to consider the place where the new growth is most advanced as the point where it originated, the posterior wall of the body of the uterus, just above the cervix, is the primary seat of the disease. The specimen is, therefore, a well-marked example of carcinoma uteri. It differs in some respects from the most ordinary form of cancer of this organ. The epithelial cells are smaller, less closely packed, and present none of the usual pockets or nests; so that the new growth assumes the anatomical character rather of true than of epithelial cancer. Still, in view of the great irregularity of forms under which epithelioma, or cancroid exists in the uterus, it seems proper to call this specimen one of epithelioma of irregular type."

The diagnosis of malignant disease, when its primary seat is in the mucous membrane of the body, can generally be made out from the following symptoms, as summed up by Sir James Simpson: 1st. "The presence of a constant, profuse, and offensive discharge. 2d. Frequent, profuse, and intractable menorrhagia. 3d. The presence of a hard, rough, and irregular tumor in the cavity of the uterus, detected by the uterine sound, and felt by the finger after the dilatation of the cervix. 4th. Recognition under the microscope of the morbid structures, as evidence of cancer. 5th. The periodic occurrence of pains slight and intermittent, perhaps, at first, but soon reaching a high pitch of intensity, and then gradually passing off." But where the malignant disease is primarily interstitial in its seat, the diagnosis becomes much more difficult. Dr. Grailly Hewitt mentions the following symptoms as the leading points of diagnosis: "The patient presents symptoms of uterine cancer (a vaginal examination fails to give evidence of it) a careful examination of the uterus above the pubes reveals the existence of an irregular, or possibly, of a regular tumor, which may be of considerable size. This tumor, which in its physi-

cal character may resemble a fibrous tumor of the uterus, is distinguished from the latter by the presence of a more or less constant, offensive, and bloody discharge, and some of the constitutional symptoms of cancer." In cases where vaginal examination fails to detect disease of the cervix, I regard hæmorrhage, coming on spontaneously some years after the climacteric, as almost conclusive evidence of malignant disease, for I have never known polypi or fibrous tumors to bleed, for the first time, any considerable period after menstruation has ceased.

Duration of the Disease.—The physician in attendance in a case of malignant disease of the uterus, is constantly asked how long she may live. Relying upon the statements of authors on this point, my answer formerly was generally wrong, as I found that my patients almost invariably outlived my expectations. Lebert gives the average duration in thirty-nine cases as a little over sixteen months. Simpson says: "Patients usually die in from two to two years and a half." From personal observation I can give the duration from the time of the first symptoms of the disease to the time of death in only twenty-six cases, fifteen of which have been under my own charge, and the remaining eleven I have seen in consultation with others. The average duration in these twenty-six cases was three years and eight months. I cannot explain the difference between these results and those of the authors before quoted. I only know the facts to be true. In one case now living, it is eleven years since I first made the diagnosis of cancer of the uterus. She is still in such health that she visits her friends, attends church quite regularly, occasionally goes to the opera, and no one suspects the existence of the disease except her husband, myself, and an old nurse, who has been with her since the birth of her first child, now twenty-six years of age. This nurse has acquired great dexterity in making applications to correct the fœtor and restrain the leucorrhœal and hæmorrhagic discharges. It is at least four years since the cervix was entirely destroyed, and more than a year since, in a

vaginal examination, the finger passed into a large cavity, so that the walls of the uterus seem to be a mere shell. I have another patient, still in a pretty good condition, in whom I recognized the existence of cancer nearly five years since. I am glad that Courty, in a great measure, confirms my experience on this point. He says: "I have very positively seen women succumb to the progress of uterine cancer several years, sometimes seven or eight, after the probable epoch when it had commenced to develop."

Treatment.—In the cancroid diseases, I think the fact has been established, beyond controversy, that the disease may be successfully treated by ablation, if the operation be performed sufficiently early to extirpate the entire diseased structure. In the "London Medical Times and Gazette," October, 1860, nearly ten years since, Mr. Hutchinson published a tabular statement of fourteen cases of "epithelial cancer of the female genitals," in which eleven recovered after excision. In two the disease recurred, and the patients died. In one the disease was too extensive for any operation. Since that publication, scattered through the medical periodicals, many other successful cases have been reported. Since 1856 I have ablated the cervix in eleven cases for this cause, nine of which have recovered and remain well. In one, death followed two days after the operation, from peritonitis, induced evidently by the imprudence of the patient. In the other, a patient of Dr. John W. Warner, the disease recurred a few months after, and the patient subsequently died.

In view of all these facts, it must be conceded that science has made great progress in successfully treating a class of diseases which, until quite recently, invariably resulted in a fatal termination. But the same success cannot as yet be claimed as to the other forms of malignant diseases of the uterus. And yet I cannot but feel that there is much to encourage us to hope that in the future we may yet attain a very much greater success in the treatment of this most terrible disease, than as yet has been dreamed of by the most sanguine of scientific

men. In the first place, we are making rapid progress in our knowledge of the histology of the disease, and the laws of its development. In the next place, facts are accumulating which show that spontaneous recovery has occurred in some cases, and art may yet, in a certain percentage, secure the same result. Aran quotes one case from Estevenet, in which the cancerous uterus was separated entirely from its attachments, and expelled by the woman in the effort of defœcation, so that for some time there were hopes of her cure. Prof. Habit reports one case of spontaneous recovery in which the cancer involved both the uterus and the vagina. Virchow, Kiwish, Rokitansky, and Scanzoni, each report one case of spontaneous recovery from cancer of the uterus. Two cases of recovery have occurred in my own experience, unless there was some mistake in the diagnosis. As both of these cases were of great interest to me, I shall detain the Academy by a somewhat detailed history of each. The first, a married woman, aged thirty-eight, mother of four children, the youngest eight years of age, came to my clinic in 1852. She had previously been seen by the late Dr. Mott, and had also been at the clinic of Professor Bedford, both of whom, as the patient said, told her that she had the cancer of the womb. Whether this be true or not, I regarded it as such. She came to my clinic for nearly two years, during which time I applied the actual cautery some fifteen or sixteen times. I think, also, my friend, Prof. Charles Budd, who was then assisting me in my clinics, applied the cautery a few times. We were both of us greatly surprised at the result, as the disease seemed to manifestly decrease after each application, but it was not entirely gone when she became pregnant. Dr. Budd attended her at the time of her confinement, when she gave birth to a living child. The first stage was completed before Dr. Budd saw her, and the second stage was less than an hour, a complete refutation of the *a priori* objection which has been urged against the actual cautery—viz., that it is liable to leave an indurated cicatrix, which would prevent dilatation of the cervix in the first stage of labor. Dr.

Budd has informed me within a few months past that this patient is still alive and in good health. I know not whether, in the light of my accumulated experience since that time, I should regard that case as one of cancer or not, but I think there can be very little doubt as to the following—a case which, for a time, brought upon me some unmerited reproach, but which has subsequently given me a great deal of undeserved reputation. In 1856 the wife of a prominent lawyer and politician in Massachusetts came to this city for consultation. She had previously been under the care of the late Dr. Green, of Worcester, and been examined by one or two eminent physicians in Boston. Her husband informed me that they had called her disease "cancer of the womb." She was cachectic and very feeble, and for more than a year she had been suffering from severe and frequently recurring pains, repeated and profuse hæmorrhage, with a constant, sanious, and extremely offensive discharge. The cervix was much enlarged, with a jagged, irregular surface, and the uterus was fixed and immovable in the pelvic cavity. My opinion as to the nature of the case coïncided with that which had been expressed by those who had seen her before, and, of course, my prognosis was most unfavorable. But with the hope of diminishing the profuse vaginal discharge and the extremely offensive odor, and that by accomplishing this I should make her journey home more comfortable, I decided to apply the acid nitrate of mercury freely to the ulcerated surface of the cervix.

Some two weeks afterwards, I received a letter of bitter reproach from her husband, in which he said that soon after her return, her mouth became very sore, and her physicians declared it to be the worst case of salivation that they had ever seen. Several of her teeth had come out, and the discharges from the vagina had increased enormously, with which she had thrown off masses of putrid and horribly offensive substances, so that it was difficult to remain in the room with her. The letter closed by saying: "Before you receive this my dear wife will have left me, and I shall always bear in my heart the feel-

ing that you, by your experiments, have greatly added to her suffering, and shortened her days." A few months afterwards I received a letter from him of quite a different tenor. She had quite recovered her health, and the disease was apparently cured. I have twice, within a few years, had the opportunity of making a vaginal examination of this lady. At the upper portion of the vagina a puckered cicatricial indentation can be felt and seen by the speculum, but nothing like the cervix or body of the uterus can be felt through the vaginal walls. Through the rectum I am able to detect what I suppose to be the remains of the body of the uterus. She is now fifty-nine years of age, fat and stout and in robust health.* It is an old

* Since this paper was read before the Academy of Medicine, a case has been published by Dr. Mettauer, of Virginia, which, in all essential features, resembles in a most remarkable degree the one related above. As these cases are, I believe, unique in medical literature, no apology is necessary for giving an abstract of Dr. Mettauer's case. "The subject of this case was a negress, aged about thirty-five, married, but had never conceived, and who had for years suffered from uterine irregularities. . . . When examined per vaginam, the os and cervix, as well as a large portion of the body of the uterus, had disappeared entirely, as they could not be discovered by the most careful examination by the toucher, and the chasm remaining would have readily received an egg of moderate size. The examination caused some hæmorrhage as well as pain, and the woman represented that bleeding was of frequent occurrence. The health of the patient was greatly impaired, as emaciation and debility had nearly rendered her helpless. So appalling was the condition of this poor woman, that the writer, after a full examination, determined to discard the case, believing it utterly hopeless. The entreaties of the woman, however, induced him to alter his resolution, and merely to quiet her distress, his consent to undertake to treat the case was yielded. After regulating the bowels, and the use for several days of soothing vaginal injections, it was determined to use the acid nitrate of mercury to the ulcerated uterus, which was applied by saturating cotton lint with it, and then conveying the tampon-like body thus medicated to the effected parts through the expanded three-bladed speculum. The lint was heavily charged with the nitrate, but not to supersaturation, and carefully pressed into the ulcer. Over this was laid a thick pledget of lint saturated with salt water, carefully packed round the first dossil. . . . In three days violent salivation came on, which continued over a month, during which there was no examination of the vagina or the ulcer. The lint came away during this time, but it was not known when. . . . The condition of the uterus was examined into the fifth week after

adage that converted enemies become the most zealous of friends.

If a young physician called upon to take charge of a case of uterine cancer should take up the most recent systematic works on gynæcology, as Byford, Thomas, Simpson, Hewitt, Courty, or Scanzoni, to ascertain what he could do to arrest the progress of the disease, to palliate symptoms, and to relieve suffering, I think the result would be a despondent impression as to any positive service he could render to his patient. Yet, in few diseases are the resources of art so manifest and so conclusive as in this, for we can most certainly improve nutrition, relieve pain, secure sleep, and arrest the sanious offensive discharges and hæmorrhages, and thus notably prolong life and make it tolerable to the end. I have often thought that the feeling on the part of the physician that the case is hopeless, discourages the constant and assiduous care which may really be of great service to the patient.

It seems to me that, within a few years past, our therapeutic resources have greatly increased, and that we may confidently look in the future for additions of great value. I shall, therefore, presume to add a few words on the constitutional, the local, and the palliative treatment of the disease.

Constitutional Treatment.—The doctrine that cancer has a constitutional origin seems to have been accepted without question until quite recently; but it is now beginning to be doubted whether the disease has not a local origin which develops secondarily a blood contamination. This view has been put forth

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the acid nitrate was applied, and most unexpectedly was found to have healed entirely, but no os, cervix or appreciable body could be discovered, and all discharge had ceased. From this time the general health rapidly improved, and in two months the woman was apparently restored to sound health, her recovery being greatly promoted by the daily use of iodide of iron and a generous diet. She lived four years after this severe trial, enjoying good health most of the time, but finally died of some acute disease, of the nature of which the writer has never been informed."—Contributions to Uterine Surgery, by John P. Mettauer, M. D., LL. D., Virginia. From "Boston Med. and Surg. Journ., March 10, 1870.

with great force by Mr. Moore, of Middlesex Hospital, London,* and I think that those who have studied the subject are strongly inclined to accept his doctrine. If in the future it prove to be true, we may anticipate great results and new discoveries of therapeutic agents in the constitutional treatment of this disease. I shall only allude to such as I can speak of from personal experience in their use.

Arsenic has long been in use in the treatment of cancer, and a host of prominent names might be quoted who have expressed great confidence in its value in this class of cases. But with the great majority of even those who have devoted their attention especially to this class of diseases, this remedy does not seem to hold an accepted position as one possessing any specific value; for many years, however, I have used it, and have regarded it as more useful than any other known remedy in this class of cases. My experience has convinced me that it possesses a decided power in improving the general condition of the patient as to flesh and strength, in diminishing the discharges, in mitigating pain, and in arresting the progress of the disease. Patients themselves become so convinced of its usefulness, that I have never known one willing to give it up after having commenced its use. I prescribe it in small doses, three drops of Fowler's solution, to be taken always after eating. I have not been in the habit, until recently, of suggesting its use in the very advanced and hopeless cases, because I have expected but slight, if any, benefit in such cases, and I did not wish to jeopardize the reputation of a remedy which I esteem so highly. But in the past two years, I have often suggested it in these cases, and I believe it has always proved serviceable.

The Missisquoi water of St. Albans, Vermont, has in some cases seemed to be of great benefit in arresting for a time the progress of the disease. In many, the use of these waters has seemed to produce no results. Many others, to whom I have suggested their use, have never reported to me, and it is there-

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Brit. Med. Jour., Aug. 26, 1865.

fore probable that the results in these cases were negative. But in a few instances, one of cancer of the breast, and four of uterine cancer, the apparent effect has been more striking than any results that I have ever seen from any other agent. None were cured, but the ulcerated surface was cleaned off, as though it had been excised with the knife; the fœtor, the discharge, and the pain ceased for some time, and the general health of the patient was greatly improved. One, a poor woman, whom I first saw in May, 1867, with ulcerated carcinoma, involving both the neck and the body of the uterus, and exceedingly feeble, emaciated, and broken down by the profuse and horrible offensive discharges and repeated hæmorrhages, rapidly improved both in her local and general condition under the use of these waters. She is still alive, although the uterus is nearly destroyed, but her general condition is much better than when I first saw her. I will allude to another case, a patient of Dr. Sims. I first saw this lady with him in December, 1868. Dr. Sims informed me that, when he examined her in Paris, in August, the whole surface of the enlarged cervix was one mass of rough, ragged ulceration. When I examined her, the diseased surface was as smooth as if it had been excised with a knife, and there was no discharge and no odor, although she suffered from horrible pains. She died a few months subsequently, but Dr. Sims expresses the strong conviction (and I concur with him) that her life was prolonged by the use of the Missisquoi waters. Although the general sentiment of the Profession does not coïncide with mine on this point, I cannot but avow the belief that the therapeutic effects of these waters are eminently worthy of careful investigation.*

* In a letter which I have recently received from Dr. D. F. Fassett, of St Albans, Vermont, a gentleman who is probably more competent than any one else to give an opinion, based on an extensive personal observation, as to the effects of these waters, he says: "I have notes of four cases only of malignant disease of the uterus, under my own observation, all of whom used the water, one with marked benefit, and three with no benefit. But I have seen many cases of malignant disease located elsewhere, as in the breast, face, and extremities, where the effect was to cause marked improvement in the general

Dr. F. A. Burrell* has published a very interesting case of apparent cure of ulcerated scirrhus cancer of the breast. It was for months treated with an external application of a watery solution of carbolic acid and glycerine, without arresting its progress; but it began to diminish in size and soon cicatrized after the internal use of carbolic acid and sulphate of quinine was added to the treatment. A tablespoonful of the solution of sulphate of quinine (four grains to the ounce of water), with three drops of the solution of carbolic acid (two drops being equivalent to one grain of the crystals), was taken three times a day. It seems to me that such cases as these are of some weight in sustaining the theory of Mr. Moore.

Local Treatment.—In all cases where the cancroid disease is confined to the cervix and can be wholly removed, I think the question is now settled that amputation of the cervix should be performed. Most operators use the écraseur for this purpose, but I have always used the knife, because I think it leaves the excised surface in a much better condition for healthy cicatrization, and I have never had any trouble from hæmorrhage after the operation. I have several times seen the écraseur used for this purpose, and I cannot resist the feeling that the tissues must be more injured by this crushing process, and that they are left more liable to morbid development subsequently, than if the wound had been made by the clean cut of a knife. I am quite certain that the process of cicatrization is more rapid. It is hardly necessary for me to add that the operation should not be thought of if the disease exist above the vaginal attachment of the cervix, or involve the mucous membrane of the vagina, or where there is any evidence of its existence in any other part of the body.

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health and in the local manifestation of the disease, but there was no positive cure"

I may add that, in my observation, with one exception, none have received any apparent benefit from the use of these waters purchased in bottles. It has been only those who have taken the waters directly from the spring that have seemed to improve.

* New York Medical Record, November 1, 1869.

Cauterizations.—There is a great difference of opinion among writers on this subject, as to the utility of cauterizations of the ulcerated surface of epithelioma. By some they are regarded as useless, if not positively injurious: as useless, because they do not reach and therefore cannot destroy the whole extent of the morbid tissue; and injurious, because they may influence deleteriously the adjacent structure and excite inflammation, thus favoring extension of the cancerous deposit and hastening the progress of the disease. I have carefully studied the objections which have been urged, and I admit their full force, if cauterizations be indiscriminately and carelessly made. But under certain circumstances I have the strong conviction that they are often very useful in arresting the ulcerative process; in diminishing the profuse discharges, and thus saving the strength of the patient; in correcting the fœtor, and thus lessening the chance of septic absorption. Where cases are seen at an early stage, and the ulcerated surface is small in extent, and the subjacent induration not profound, the progress of the disease has seemed to be manifestly retarded by their use. The principal agents which I have used for this purpose in the malignant diseases of the uterus, are the actual cautery, the acid nitrate of mercury, and the chromic acid. In those cases where the malignant deposit has not extended to the adjacent organs, and particularly to the mucous membrane of the vagina, I use the actual cautery far more frequently than any other agent. My reasons for this preference are the following: It is a much more manageable agent than any other, as it only acts upon the part with which it immediately comes in contact; the depth of cauterization can be perfectly regulated; no pain is produced by its use, either at the time or subsequently;* and when the

*I have seen pain caused in the use of the cautery by the nervous hurry of the operator, who pushed the iron with some force against the os, but never under any other circumstances. In a patient whom I saw twice with Dr. Thebaud, he made use of Nelaton's gas cautery, by which he was able to effectually cauterize a funnel-shaped cavity in the body of the uterus after the cervix had been entirely destroyed by the disease; and the patient believed, as I believe, that the effect of each cauterization was decidedly useful, as she suf-

slough is thrown off, no hæmorrhage follows, as I have often seen occur when other agents are used.

I have chiefly used the acid nitrate of mercury in those cases where granulations sprout from the interior of the cervix, which have a great tendency to bleed. But for some years past I have become very cautious in its use, as in three instances I have caused profuse salivation by one application of this agent, and I have heard from medical friends of several other cases of like result. The susceptibility to this effect seems to be manifestly increased in a broken-down, cachectic system, and in such it is a consequence greatly to be deplored.

In cauliflower excrescence, where the disease has extended beyond the reach of the knife, I generally make use of the chromic acid (100 grains to the ounce of water), applying it very carefully with a pencil-brush to the surface. Ordinarily its action is not followed by pain, but I should mention that in one case, six hours after the application of the chromic acid, severe pain came on, so that I was sent for in the night, and after using three hypodermic injections of morphia without relief, I was obliged to keep my patient under the full anæsthetic influence of chloroform for nearly four hours. A pretty severe attack of peritonitis followed, from which she entirely recovered in a few days. There was complete and apparently healthy cicatrization of the diseased surface, and for more than a year I deluded myself with the hope that the disease was cured. But when it again appeared its progress was very rapid, and she died in eight weeks after the first symptom of its recurrence. I have repeatedly made trial of various other caustics, such as the arsenical paste, chloride of zinc, etc., but without such results as lead me to substitute either of them for those above mentioned.

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fered very little during the progress of her disease from profuse or offensive discharges or pain. She lived about two years and a half after her disease was known to Dr. Thebaud, the immediate cause of her death being a sudden, violent hæmorrhage, which occurred when out of town.

Dr. Routh,* of London, has published two very interesting cases of apparent cure of epithelial cancer of the cervix uteri by the use of a strong spirituous solution of bromine (bromine, gr. v.–x. to fifty minims of spirits of wine). Since the publication of the paper by Dr. Routh, I have seen no case where the use of this agent would be admissible, but I am determined to try it when a proper case shall offer. It should be mentioned that Dr. Routh regards it as a powerful caustic, which is not unattended with danger to the patient if not carefully applied, and to the operator in its preparation. I have made great use of bromine in the treatment of the malignant diseases of the uterus, but in a different way and for a different purpose, which I shall allude to presently.

Palliative Treatment.—On this point I shall add but a few words. I have long been impressed with the belief that many practitioners err, in allowing the victims of this disease to suffer, by trusting to feeble and inefficient agents, such as hyoscyamus, belladonna, cannabis indica, etc., for the relief of pain, from the fear that the patient might become habituated to the use of opium, in short, an opium-eater. Now, I hold that in such a disease as this we are bound to give our patients relief from pain if we can, no matter what the agent is, or how large the quantity or how long it may be continued. It has been said that a too early use of opium may lead to a habit which will injure the general health; but protracted pain, I believe, will injure the general health much more than any agent which may be necessary for its relief. If the milder agents will suffice for this, it is well; but there should be no hesitation, if they prove ineffectual, in at once resorting to the use of opium or any of its preparations which will best accomplish this. The special form of the agent which gives the most perfect immunity from pain, with the least reäctionary evil, should be carefully ascertained by trial. In some, neither opium nor any of its pre-

* "On a New Mode of Treating Epithelial Cancer of the Cervix Uteri and its Cavity." By C. H. F. Routh, etc. "Transactions of the Obstetrical Society of London," vol. viii., 1866, p. 290.

parations can be tolerated, and in these the chloral has proved an inestimable blessing. A patient that I now have, preferred to pass sleepless nights, tortured with pain, rather than endure the distressing nausea which followed a sufficient dose of any form of opium; and now she passes a blissful night of sleep by taking, on alternate nights, thirty grains of chloral. The effect is continued in a less degree the second night, but, if she takes it in any dose the second night, she suffers from both nausea and headache.

In some cases there is great suffering from the extreme sensitiveness of the ulcerated surface, and this I have found best relieved by pessaries of iodoform, introduced at night into the vagina.

℞—Iodoform, grains x.;
Butyri cacao, ʒ j.;
Glycerine, gtts. 5.

M. One pessary.

These pessaries seem also to correct almost entirely the offensive odor of the discharges.*

As lotions for arresting the discharges and removing the fœtid odor, I have found the most useful to be a solution of bromine, or of permanganate of potash, or of carbolic acid. Where the cervix or any portion of the vagina is ulcerated, I am careful to direct that these lotions should not be forcibly projected against the diseased surface by any form of syringe, but that the vagina be filled by a siphon-tube from a vessel placed considerably above the patient. The "fountain syringe" accomplishes this result in a very convenient manner.

* In the discussion of this paper before the Academy, Prof. E. R. Peaslee states that he had used an ointment of iodoform, dr. j. to the ounce of lard, as an application to ulcerated epithelioma, with the effect of relieving pain, correcting the fœtor, and notably diminishing the diseased mass.

ART. II.—SESQUICHLORIDE OF IRON AS A PROPHYLACTIC OF ACUTE RHEUMATISM. By Dr. ANSTIE.

A considerable space of time has now elapsed since the announcement, by Dr. Russell Reynolds, of his observations on the successful treatment of acute rheumatism by large and frequent doses of the tincture of sesquichloride of iron. I do not know to what extent this plan of treatment has become generalized; but there have been a good many reports in the medical journals of its employment in different hospitals; and the balance of evidence derivable from these seems distinctly favorable to the method. My own experience of it in fully declared acute rheumatism has not been large. I have treated six cases altogether with the sesquichloride, and in four of these I think the results distinctly bore out the main assertions of Dr. Reynolds as to the prompt relief of the pains, the limitation of the extent of mischief, and the shortening of the illness; in the other two, the medicine seemed to have no special effect. But it is not of the use of the sesquichloride in fully developed acute rheumatism that I now wish to speak. My opportunities of seeing disease on a large scale being chiefly those afforded by the out-patient room, it is rather the first advancings and threatenings of acute rheumatism, than the declared disease, that I am in the habit of seeing. A considerable number of persons present themselves in my out-patient room, in the course of twelve months, suffering from the preliminaries of acute rheumatism; it is one of the small group of really serious diseases (amongst a much larger variety of trivial complaints) which occupy one's attention in out-patient practice, and was formerly a matter of great dissatisfaction to me, from the apparently almost total failure of remedies to produce any effect. Whereas threatenings of gout could be very commonly dealt with in such a manner as to prevent the attack, or render it trivial, the onset of acute rheumatism seemed never to be averted by drugs when once the prodromata had reached the stage which pretty frequently presented itself before me, viz., a more or less ob-

scure aching of several joints,* a yellow sallowness of face, with patches or streaks of dusky redness, blanket-like furring of tongue, an oily moisture of skin, a distinct though slight elevation both of pulse and temperature, and a certain anxiety of respiration. So far as the history of such patients could be traced, they were almost invariably found to have developed the full symptoms of the acute disease, and very often (after once seeing them in the out-patient room) one encountered them, a few days later, in a ward in the hospital.

Very different have been the results of treatment since I adopted the use of full doses of sesquichloride of iron from the first moment of such cases presenting themselves. During the past twelve months I have done this fully. Whenever a patient has presented himself with articular pain and slight fever that were plainly of the rheumatic and not of the gouty type, he has been at once placed on thirty or forty minims doses of the tincture of sesquichloride, from three to six of which, according to the severity of the symptoms, have been given in each twenty-four hours. I have several times called the attention of the students to the fact that (unlike what used to happen) these patients reäppear in my out-patient room on my next hospital day; and in the great majority of instances declare themselves greatly relieved. Since July, 1870, I have treated twenty-nine such patients, of whom thirteen had previously had one or more regular attacks of rheumatic fever, for the symptoms now referred to, with the full doses of iron; and of these, seventeen have lost all pyrexia and spontaneous joint-pain within the three or four days elapsing before my next day at the hospital. Only three have, under my own eyes, developed the full acute disease, and been sent into the ward. Of the remaining nine, four disappeared altogether from my knowledge, so that I cannot say what became of them; the other five, though their symptoms were checked, remained in a state of what might be

*I have, on the contrary, known pain in or near a single joint (simulating neuralgia) with slight fever, sallow skin, etc., yield to iodide and bicarbonate of potash.

described as subacute rheumatism during from ten to twenty-two days.

I cannot help remarking with emphasis on the contradiction of old ideas which is involved in the effect of this iron treatment upon the furred tongue. Of course it becomes speedily blackened; but so far from the furring increasing, or the dryness and foul taste becoming more pronounced, what commonly happens is, that after a few days the epithelial coating falls off in considerable patches, and the tongue soon cleans altogether. I believe the prophylactic treatment of rheumatism by the sesquichloride to be one of our most valuable recent improvements in medicine.—*London Practitioner.*

ART. III.—FABER'S TALKING MACHINE. By RALPH M. TOWNSEND, M. D.

A machine that utters the articulate sounds of the human voice has lately been exhibited in this city, the initial exhibitions being given at the Jefferson Medical College and the University of Pennsylvania respectively. On both of these occasions an interesting accompanying lecture on "The Organs of Voice and the Mechanism of Speech" was delivered by J. Solis-Cohen, M. D.

Joseph Faber (uncle of the present exhibitor of the apparatus), a former Professor of Mathematics in Vienna, constructed this machine as an exact copy, so far as was possible, of the human vocal apparatus. It was exhibited here thirty years ago, since which time the present Prof. Faber has remodeled and improved it. Its mechanism is intricate, resembling, in its labyrinth of springs, strings, wires, and tubing, a loom, and in the complexity of its workings, the Alden type-setter.

The machine proper is mounted upon a table and operated by a key-board and levers, like a piano. Under the table is a treadle that works the bellows supplying air to the larynx. The latter is formed of india-rubber, with a movable glottis of

thin lamellæ of ivory to give the necessary tension. The upper jaw is wooden and stationary, having a lip of leather. The under jaw, which is movable, is made of gutta-percha, as is the roof of the mouth. The tongue is made of rubber, is flexible and movable, and can be pressed either against the palate or back into the throat. As the mouth is unprovided with teeth, a narrow metallic band is made to fall from over the upper lip and close the fissure of the mouth whenever the dental sounds are required. There is no soft palate. The nasal opening which permits the production of the sounds of *m* and *n* is formed of a tube proceeding from the larynx, beyond the vocal cords, and when the lips are closed, as for *b*. In the same way the *n* is made by the *d*. A little shuttle-wheel is so contrived as to be dropped into the current of air proceeding to the glottis, where its rapid revolution produces the sound *r*.

The lungs are represented by a pair of bellows. The instrument speaks phonetically, and therefore can utter words in any language. Fourteen sounds are used—viz., the vowels, *a*, *e*, *i*, *o*, *u*, and the consonants, *l*, *r*, *w*, *f*, *s*, *sh*, *b*, *d*, and *g*. In some instances remaining sounds are obtained by variously combining these, and in others they are modified by opening the glottis. The operator, Madame Faber, being a German and not speaking a word of English, the accent of the former tongue is readily distinguishable in the utterance of the machine. A mask, with a tubular nose, is slipped over the mouth when the machine speaks French, so as to give the nasal sound peculiar to the pronunciation of that language. The instrument is also able to speak in a very high or in a deeper tone; but all parts of a complete sentence must be intonated alike.

Such, in brief, are the appearance and construction of this mechanical marvel. Its utterances are distinct, although monotonous and sepulchral—totally devoid of modulation, emphasis, or shade of expression. Its emotional impressions rank with those of Mrs. Shelley's "Frankenstein"—a literary monster that has haunted the pillows of two generations of nocturnal readers. It affects a timid individual like a gibbet and

skeleton creaking and rattling in the night wind; and one does not marvel at the practical deductions of a Huxley or a Darwin after hearing it drawl out, "I—can—talk—as—well—as—any-bothy—buth—I'm—a—ma—sheen."*

As a fruit, however, of man's patience and ingenuity—as an apparatus illustrative of the workings of the vocal organs—and, finally, as showing the infinite superiority of God's handiwork over man's most elaborate imitations—in all of these this machine stands forth in pleasantly instructive lights, and therefore has its lessons that cannot be two well studied.

In his lecture, Dr. Cohen gave a short sketch of the history of these talking machines, an abstract of which will not prove uninteresting:

"Although attempts at the artificial production of speech had been long made, the first partial success seems to have dated from 1779, in which year the Imperial Academy of Sciences at St. Petersburg proposed, as the subject of one of their annual prizes, an inquiry into the nature of the (Continental) vowel-sounds—*a*, *e*, *i*, *o*, and *u*—with the construction of an instrument imitating them artificially. This prize was awarded to one Kratzenstein, who showed that the vowel-sounds could be distinctly produced by blowing through a reed in the lower ends of pipes of certain formation—one for each vowel.

"About the same time, Wolfgang von Kempelen, of Automaton Chess-Player notoriety, attempted the construction of a talking machine, in which he was moderately successful. The vowel-sounds were produced by adapting a reed to the lower portion of a funnel-shaped tube, the sounds of which were modified by inserting the fist into the mouth of the funnel. He afterwards constructed an oval-shaped box which opened on hinges so as to represent the action of a jaw. The tube containing the reed entered this box, and by opening and closing the jaws he produced the sounds *a*, *o*, *u*, in a satisfactory man-

* In support of Darwin's theories the machine might add, but Dr. Darwin—theths—I may—if I behave myselthf—become—a man.—ED.

ner; *e* was imperfect, and he was unable to produce the sound *i*. (These are the Continental vowel-sounds.)

"Subsequently, he was enabled to obtain from different jaws the sounds of the consonants *p*, *m*, *l*, and, by means of combining these, he was enabled to deceive the ear by an imitation of most of the other consonant sounds; and, finally, he completed an arrangement with only one mouth and one glottis, the mouth consisting of a funnel-shaped piece of india-rubber, the sides of which were compressed by the fingers, so as to represent the lips in the formation of *b*, *p*, *m*, and *v*. In the tube leading from the wind-chest into this mouth were two tin tubes, capable of being opened by compressing a button at their free extremity, and thus representing the nostrils. When both of these were open, and the mouth closed, he produced the sound *m*, and when only one of them was open, he produced an *n*. Three valves were upon the wind-chest, two of which when open produced the sounds *s* and *sh*, respectively, made by little pipes; and the third valve when opened permitted the vibration of a separate reed which made a sound somewhat resembling the roll of the *r*. The whole apparatus was enclosed in a box about three feet in length and rectangular in form. It was placed upon a table, and covered with a cloth, under which the inventor placed his hands while operating the machine. He was able to produce a great number of words and sentences—among others, *papa*, *mamma*, *lama*, *aura*, *opera*, *astronomy*, *Constantinople*, *exploitation*, *vous etes mon ami*, *je vous aime de tout mon cœur*, *venez avec moi a Paris*, *Leopoldus secundus*, *Romanorum imperator semper Augustus*, etc.

"Mr. Willis, of Cambridge, repeated the experiments of Kempelen, using a shallower funnel, and, instead of introducing his hand to modify the sounds, succeeded in producing the whole series of vowel-sounds by sliding a flat board more or less over the top of the funnel. He then adapted tubes to the reed, and varied the length of the tube by telescopic sliders. When the tube was shorter than that of a stopped pipe in unison with the reed, he produced an *i*, and by increasing the length of the

tube the sound changed in succession to *e*, *a*, *o*, and *u*. When the tube was lengthened so far as to be half as long again as the length of a stopped pipe, in unison with the reed, the vowels again were sounded, but in a reversed order, and then again in direct order when the length of the tube was equal to twice that of a stopped pipe in unison with the reed."

After this came the original invention of Professor Faber, which, with its later modifications, I have above described.—*Medical Times.*

Art. IV.—Small-Pox—Vaccination and Revaccination—False Ideas.

The following notes regarding vaccination and revaccination have been put together for the purpose of showing how false many of the prevailing ideas on the subject are, and saving time and trouble to those who are engaged in trying to find out the real truth regarding it:

It appears now to be fully acknowledged by medical men—

1. That vaccination, though it greatly lessens the susceptibility of taking small-pox, does not render the reception of it in after years altogether impossible.

2. That vaccination in most cases greatly modifies the character of thesmall-pox eruption and lessens the severity of the attack.

3. That revaccination gives an absolute (?) immunity from small-pox.

The reasons for coming to these conclusions are as clear as they possibly can be, and there cannot be the smallest allowance made for people who wilfully oppose such arguments as the following:

Dr. A. C. C. De Renzy, Sanitary Commissioner in the Punjab, says: "In this Province, with a population of 18,000,000, the deaths from small-pox are never less than 20,000 a year. In 1869 they numbered 53,195." In England the annual ave-

rage mortality does not exceed 5,000, though previous to the introduction of vaccination it was quite as high as in the Punjab.

The facts, again, concerning vaccination in Scotland and Ireland, supplied to Dr. Anstie by Dr. Seaton, of the Privy Council, speak for themselves as plainly as facts possibly can do.

In the former country it appears there was no vaccination act prior to 1863, and the average yearly deaths from small-pox in twelve years, 1853–64, were 1,054. In 1865, '66, '67, and '68, they were respectively 175, 200, 124, and 25.

In Ireland vaccination was not compulsory before 1863, and in the periods of 1830–40, 1840–50, and 1850–60, the respective annual average mortalities were 5,800, 3,827, and 1,272. In the years 1864, '65, '66, '67, '68, they were respectively 854, 337, 187, 20, and 19. In the first quarter of 1869, again, there were only three deaths, and in the second none. Let any one who is skeptical as regards the advantages to be derived from vaccination pass in review the valuable evidence of Mr. Marson, at the small-pox hospital, London. In 5,000 cases of post-vaccinal small-pox, under observation from 1836 to 1855, it appears that there were 35 per cent. of deaths among those that were unvaccinated; 25.57 among those that stated they had been vaccinated, but exhibited no cicatrix. Among those that had 1 cicatrix, the number of deaths per cent. was 7.73; 2 cicatrices, 4.70; 3 cicatrices, 1.95; 4 or more cicatrices, 0.55.

The percentage of deaths among those that had well-marked cicatrices was 2.52, and 8.25 among those who had badly-marked cicatrices. Among those who had small-pox previously, it was 19.

In Pinchbeck, Lincolnshire, with a population of about 3,000 inhabitants, only one death has occurred from small-pox during the last thirty years, and this was in the case of an unvaccinated person. The medical officer of the district has three times received the government grant for efficient vaccination. Dr. Seaton, in his evidence before the Select Committee, stated that vaccination had the effect of reducing the mortality of

children under five years of age. In Scotland the infantile mortality has been reduced from 70 and 80 per cent. to 55. In Greenock, the mortality under five years of age has been reduced to 36 per cent., and in Glasgow to 28 per cent.

In the "Lancet" of the 8th of April, 1864, the following statement occurred: "Not a single revaccinated case has been admitted into the small-pox hospital at Homerton, and no death of a vaccinated person has occurred under seventeen." "This," as the editor remarked, "shows the protective power of even imperfect vaccination up to puberty, and the necessity for revaccination at this time."

The strongest case one can advocate in support of revaccination, is the fact that not a single nurse has died at the small-pox hospital for the last thirty years, in spite of the infection to which they are constantly exposed. As regards the lymph fit for the purpose of vaccination, a good deal of doubt seems to exist. Some say that carefully-selected matter from revaccination cases is as sure in its effects as that taken from primary vesicles; others, that secondary vaccine matter is of very little use, and that only that taken from the arms of infants should be used; while others assert that the lymph taken from the arms of children has become deteriorated by passing through so many systems, and that a fresh supply should be obtained from the original source. Now, with regard to the use of secondary matter, there can be no doubt that it is capable of setting up the same constitutional disturbance, and producing the same kind of vesicles, as lymph taken from primary cases, but still it not infrequently happens that the vesicles are unduly hastened or otherwise irregular in their development. And from a review of the facts mentioned in the "Lancet," 29th of July, 1871, by Dr. Barbour, of the Stockwell Fever Hospital, I would say that the amount of protection to be gained from its use is very small, and that it should be employed under very exceptional circumstances; where none other for the time being can be obtained, and revaccination is imperatively demanded. Bryce's test should certainly be employed, in order to see

whether it has efficiently performed the purpose for which it was intended or not; in other words, lymph should be again inserted into the arm a few days after the first vaccination. If both vesicles maturate and also die away at the same time, then the first vaccination may be considered to have produced the desired effect; but if the second vesicle goes through all the stages of the primary vesicle, then the first operation has been a mere local affection, and has really exercised no protective influence whatever. The following case occurred in my own experience: A lady who had apparently been successfully vaccinated with secondary lymph, was one month subsequently revaccinated with primary. The resulting vesicles were as perfect in every respect, and went through exactly the same course as those occurring from a regular primary vaccination. This was a proof, then, that the first operation produced a local effect only, and that it was incapable of affording protection against the infection of small-pox. In answer to those who affirm that vaccine matter loses its effect by constant use, I would say, for the same reason, the poison of fever ought to become less virulent and infectious each succeeding year; but this is not the case, for though, owing to altered atmospheric influence, prevailing epidemics may, for a time, die out, they soon return when the conditions are again favorable, with all their former activity. But, in addition to this, let us see what opinion Jenner held upon the subject. After a careful watching of vaccination for upward of twenty years or more, during which time lymph had been successfully transferred from subject to subject, he came to the conclusion that it underwent no change whatever in its qualities. Marson, Creely, and others also, whose experience is very great, have proved, so far as such matters admit of proof, that vaccine lymph does not lose any of its prophylactic power by a continued transit through successive subjects. When lymph degenerates in transmission, it is invariably due either to want of proper care in the selection of subjects or to inattention to certain details essential to successful vaccination. But let us now, for one minute, consider

the evidence of those who have experimented with lymph taken directly from the heifer.

During the siege of Paris, Dr. Quinquand had all successful cases with the human lymph, but only one-third with heifers'.

Dr. Thevenot, with calf vaccine, had only two successful cases out of twenty-one.

Of thirty-two surgeons in Paris who sent in their reports, one says that vaccine from the calf became better after passing through the systems of three or four different children, though bad and difficult to introduce for the first time. The rest (thirty-one) agree that vaccination from the calf was provokingly unsuccessful, succeeding at the very utmost only in a fourth of the children vaccinated directly. Of sixteen others who tried the calf virus thirteen failed completely.

Dr. Gaillard, who succeeded 170 times out of 283 with calf vaccine, was successful in 2,740 times out of 2,856 with Jennerian vaccine.

The next question, about which some amount of uncertainty prevails, is as to whether syphilis and other diseases can be conveyed by vaccination. Mr. Hutchinson has lately brought forward a series of cases to prove that syphilis is capable of being so conveyed, and, to say the least, they certainly appear to wear a very suspicious aspect. Still, it must be remembered that in 1857 Mr. Simon (medical officer of the Board of Health) addressed a series of questions upon this very subject to a large number of medical men, both in this and other countries, and received answers from no less than 539, with scarcely an exception, entirely in the negative. They declared that syphilis could not be conveyed by means of true vaccination; but they pointed out that, by gross carelessness, it might be innoculated instead of vaccine. The direct experiments, moreover, of Cullerier and others with mixtures of syphilitic matter and vaccine, and vaccine matter taken from persons suffering from constitutional syphilis, are most powerful arguments against the idea that syphilis is able to be transmitted by means of lymph taken out of a true Jennerian vesicle. To show that two

poisons cannot be present in a true Jennerian vesicle, lymph may be taken from a vesicle developed in a person who has been vaccinated too late to prevent small-pox, and used without the slightest hesitation for vaccinating another child. It would certainly appear, from these facts, that vaccination as such can convey syphilis with it through a syphilized lancet, or blood taken up with lymph from a syphilitic infant, may cause it to break out in persons subsequently operated upon. It might, nevertheless, be well to do as Mr. Hutchinson suggests—viz., to avoid taking lymph from first-born children, and take it only from second or later children, in families of which the oldest has enjoyed good health. As regards the idea of scrofula being conveyed by vaccination, there can be no doubt, as the "Lancet" says, "that it is a mistake. Its development is, on the contrary, greatly prevented, inasmuch as small-pox, by weakening the system, was often the occasion of scrofulous and tubercular disease. Again, when skin eruptions are occasioned by vaccination, the fault is not necessarily with the matter, but with the constitution of the child vaccinated, which cannot bear even the slight disturbance of vaccination with impunity; and a *fortiori* cannot bear the destructive disturbance of small-pox, which is the almost certain alternative." Among the instructions lately issued by the Lords of the Privy Council are to be noticed the following:

"Never take lymph from cases of revaccination. Never use or furnish lymph which has the slightest admixture of blood. Take lymph only from well-characterized, uninjured vesicles, at the stage (one day week after the vaccination) when they are fully formed and plump, but with no perceptible commencement of areola. Take lymph only which, as it issues from the vesicle, is perfectly clear and transparent, and none which is at all thin and watery. Never squeeze or drain any vesicle. From such a vesicle as vaccination by puncture commonly produces do not, under ordinary circumstances, take more lymph than will suffice for the immediate vaccination of five subjects or for charging several ivory points, or for filling three capillary

tubes; and from larger or smaller vesicles take only in proportion to their size. Be careful never to transfer blood from the subject you vaccinate to the subject from whom you take the lymph. Note any case wherein the vaccine vesicle is unduly hastened or otherwise irregular in its development; and if similar results occur in other cases vaccinated with the same lymph, desist at once from employing it. Change the lymph if on the day week after vaccinnation the vesicles are not entirely free from areola. Keep the lancet and other instruments scrupulously clean, and do not use them for other surgical operations. Cleanse the instrument used thoroughly after one operation before proceeding to another.

"Except so far as any immediate danger of small-pox may require, vaccinate only such subjects as are in good health. As regards infants, ascertain that there is not any febrile state, nor any irritation of the bowels, nor any unhealthy state of skin—especially no chafing or eczema behind the ears, or the groin, or elsewhere in folds of skin. Do not, except of necessity, vaccinate in cases where there has been recent exposure to the infection of measles or scarlatina, nor where erysipelas is prevailing in or about the place of residence. Take lymph only from subjects who are in good health, and, as far as you can ascertain, of healthy parentage, preferring children whose families are known to you, and who have elder brothers and sisters of undoubted healthiness. Carefully examine as to skin disease and signs of hereditary syphilis."

There can be no doubt that the present epidemic has had the effect of causing several disputed points to be finally set at rest, and among these, the question as to whether it was right to vaccinate women who were pregnant. The old idea was that vaccine, being a poison similar to that of small-pox, would cause abortion to take place; but this has been contradicted by all the first obstetricians. Next it was thought unsafe to vaccinate children much under six weeks, whereas the medical officer of the Privy Council has distinctly advised that children who are exposed to the influence of the small-pox poison should

be vaccinated within a week of their birth. It was also supposed to be dangerous to revaccinate elderly people, but this has been shown to be incorrect. There can be no question that grown-up people suffer, generally speaking, more from vaccination than children, just as they do when attacked by measles, whooping cough, etc., and this, I believe, has given rise to the idea of vaccination affecting people worse during what is called a varioloid state of atmosphere.

The materials used for collecting lymph are—first, ivory points; second, glasses; third, capillary tubes. The last named are the best, inasmuch as the lymph is always kept in a fresh state.

The methods employed for vaccination are—first, puncturing; second, scratching; third, blistering.

The last mentioned (introduced by Mr. Ellis, of London,) is supposed to render the absorption of the lymph more certain, but it most undoubtedly entails a greater amount of trouble, and I cannot say, from my own experience, that it insures a greater amount of success than either puncturing or scratching, when carefully done. In a few instances I have seen very bad arms result from this method. The effects produced by revaccination are not, generally speaking, the same as those which exhibit themselves after primary vaccination. As far as I can see myself the effect of the vaccine manifests itself in three different ways.

1. There may be a perfect vesicle passing through all the different stages, showing that the protective effects of the first vaccination have entirely passed away.

2. There may be a scab formed, but no distinct vesicle, showing that the protective effects of the first vaccination only partially remain.

3. There may be only slight redness produced, showing that the protective effects of the first vaccination remain perfect, or nearly so.

In all cases, I think, where there is not a perfect vesicle, re-

vaccination should be tried again, in order that the operation may not hereafter from carelessness fall into disrepute.

In order that the general public may learn the benefits resulting from vaccination and revaccination, all possible information should be afforded them on the subject, and medical men should be particularly anxious not to let any discredit fall upon the operation from the want of proper care. Once let the public be fully convinced of the fact that they cannot possibly receive harm from the inocculation of vaccine matter, and we may have the satisfaction of seeing small-pox in time banished from our shores.—*Edinburgh Medical Journal.*

Art. V.—Yellow Fever—Epidemics in Charleston, S. C.—Statistics from 1700.

The Charleston (S. C.) "Courier" insists that the evidence thus far is conclusive that whatever fever prevailed in that city last year, was owing entirely to local causes and the want of proper attention to the hygiene of the city, and that there has been nothing epidemic in its character. The "Courier" also gives the subjoined interesting statistics, relating to the health of the city in former years, explaining that it is indebted for them to Hewitt's, Ramsey's, and Shecut's histories, Drayton's Memoirs of the State of South Carolina, and various medical journals, but more especially to an able and intelligent work published in 1849 under the name of the "Census of the City," compiled by Drs. John L. Dawson and Henry W. DeSaussure.

The first epidemic of a destructive kind in Charleston, was in 1699 or 1700, which year is not ascertained. This was called "the plague," and destroyed a great many people, the number unknown.

1703.—The same disease occurred, with similar results, and was called "the plague."

1728.—Twenty-five years elapsed, during which no mention

is made of epidemic sickness, when the disease of 1700 and 1703 appeared, and was called yellow fever.

1732.—It began in May and continued until October. During its severest period eight to twelve died daily. The population of the city was then about 10,000.

1739.—It appeared, but not violently; also, in 1745 and 1748 with some severity, but the deaths cannot be ascertained.

1753 and 1755.—A few sporadic cases appeared, after which, until 1792 (some writers say 1794) a new series of epidemics commenced, appearing in 1795, 1796, 1797, and 1799, and 239 died; 1800, 184 deaths; 1802, 96 deaths; 1804, 148 deaths; 1807, 162 deaths. The population of the city at these periods was 20,000.

The fever passed then over the ten succeeding years.

1817.—There were 270 deaths, of whom a great many were children.

1819.—There were 176 deaths of yellow fever.

1820.—A few sporadic cases.

1824.—231 died of fever, and this year it reached Sullivan's Island, causing many deaths.

1827, 62 deaths; 1828, 26 deaths; 1830, 31 deaths.

1834, 49 deaths; 1835, 24 deaths.

1838.—The year of the great fire; the fever was destructive, causing the death of 353 persons. Population, 30,000.

1839.—133 deaths; the fever epidemic. From this date for ten years the city maintained a high state of health.

1849.—A sickness prevailed strikingly similar to that existing in 1871. The weather was followed by heavy rain. The beginning and progress of the disease, the gradual change into a very "mild type of yellow," or a "broken bone," or a "bilious attack," were all like last season. The fever began 1st August and ended 1st October; 123 died. During its progress there was very little alarm, and no panic.

1852.—An epidemic prevailed; 280 died.

1854.—Was a severe year; 624 died.

1856.—There were 206 deaths.

1858.—The most distressing sickness ever known here prevailed, when 680 died.

The population in 1858 was about 45,000. The "Neck" had been annexed in 1850.

What were the causes which prevented yellow fever from appearing among us to any great extent from 1703 to 1728, from 1739 to 1792, from 1807 to 1817, from 1839 to 1849, from 1858 to 1871? This is an interesting question.—*Ex.*

ANALYTICAL DEPARTMENT.

"Qui e nuce nucleum esse vult, frangit nucem."—PLAUTUS.

ART. I.—CEREBRO-SPINAL MENINGITIS OR SPOTTED FEVER—ANSWER TO CORRESPONDENTS.

The epidemic of cerebro-spinal meningitis which was spoken of in our last Journal as having recently visited Buffalo for the first time, continues to prevail with unabated frequency; the Health Officer's report for March shows thirty-two deaths from this disease alone. As we have already said, we are unable to throw any great light upon the nature or causes of this disease, but we would faithfully record the facts and circumstances of its appearance, and direct attention to the importance of studying the conditions and surroundings of all cases as they appear, thus hoping to finally gain some better and more satisfactory knowledge of its nature, causes and modes of cure. With this view we have noted the general hygienic conditions in the forty cases which have already fallen under our own care, or been seen in connection with our professional friends. These furnish representative cases of the disease as described by all authors, some mild in character and terminating favorably, others of active or malignant form, and terminating fatally. It is impossible to determine at present the proportion of deaths to cases, our own statistics show nothing on

this point, being called to see many of the cases because severe and certain to end fatally. It seems probable that the death rate is not so great as has generally been estimated in most other places where it has prevailed epidemically. Of the forty cases, twelve are now known to have ended fatally, and of the remaining, others are likely to also end fatally, however, taking away the cases seen in consultation, mainly on account of their severity, and the proportion would be lessened nearly one-half.

We are asked, Is it contagious? For ourselves, we answer no, and we believe the Profession, with remarkable unanimity, have regarded it as non-communicable by the sick to the well. Its prevalence in the French garrisons and barracks without extending to the civil population, and some other isolated facts giving the appearance of its extending by contagion, led a few physicians to suppose it "infectious" or contagious, but we believe that their views were not sustained by subsequent observation, and that it may safely be regarded as settled, that it is not contagious. Again, we are asked, Is it malarious? or does it arise from sewers and other sources of atmospheric contamination? In Buffalo its rise and progress are connected, so far as can be known, with no animal or vegetable putrefaction, nor with any miasmatic or other deleterious or offensive emanations. It has made its appearance in the hovels of the poor and palaces of the rich; it has been about equally fatal when seen in the most salubrious and best ventilated apartments as when occurring in places destitute of all healthy surroundings. We cannot answer this question better than by quoting from the excellent work of Stillé, upon Epidemic Meningitis, which we would recommend to all who desire to study the disease. Speaking of the causes, he says: "It may be said in general terms that epidemic meningitis has occurred in all portions of the temperate zone inhabited by European races and their descendants, in all sorts of localities, among all ranks and conditions of society, at all ages, and in both sexes, and that it is therefore in the strongest sense of the word a pandemic disease. And, when it is added that the dis-

ease is not disseminated by contagion, it evidently falls into the category of the diseases referred to, of whose occurrence no other explanation is at present possible than that they are directly produced by a specific atmospheric poison."

Does it resemble typhus fever, and is it a new phase of that disease? Every experienced physician, when he meets his first case, though he may not recognize its true nature, will at once see that he has a group of remarkable symptoms, and that it is something he has never before seen; he will soon decide upon its true character by exclusion, rejecting every other form of disease, he will soon arrive at the true nature of the malady. The cases do not resemble anything we have ever before seen, the symptoms, appearance of patient, and history of attack, are quite unlike that present in any other disease. Still, there are some resemblances to other low forms of disease, and some physicians liken it to typhus. We cannot better point out the wide distinction than by quoting a tabular summary made by Stillé.

EPIDEMIC MENINGITIS.	TYPHUS FEVER.
A pandemic disease. Occurs in places remote from one another, and without intercommunication.	Essentially an endemic disease. Always due to local causes. Spreads by intercommunication only.
Attacks all classes of society. Is never primarily developed by squalor and deficient ventilation.	Attacks primarily the poor, filthy, and crowded alone.
Is not contagious.	Contagious in a high degree.
More males than females attacked.	The two sexes are equally affected.
More young persons than adults.	More adults than young persons.
Generally occurs in winter.	Epidemics are irrespective of season.
Eruptions are wanting in at least half of the cases; they occur within the first day or two.	The eruption is rarely absent, and appears between the fourth and the seventh day.
The eruptions are very various, including erythema, roseola, urticaria, herpes, etc. Ecchymoses are common.	The eruption is uniformly roseolous and then petechial. Ecchymoses are rare.
Headache acute, agonizing, tensive.	Headache dull and heavy.
Delirium often absent; often hysterical, sometimes vivacious, sometimes maniacal. Generally begins on the first or second day.	Rarely absent; usually muttering. Rarely begins before the first of the week.
Pulse very often not above the natural standard; often preternaturally frequent or infrequent. Is subject to sudden and great variations.	A slow pulse exceedingly rare. Its rate is pretty constantly between 90 and 120.
"The temperature is lower than that recorded in any other typhoid or inflammatory disease." It is also very fluctuating.	The temperature is more or less always elevated, and it does not fall until the close of the disease. "The skin is hot, burning, and pungent to the feel."

The body has no peculiar smell.	The mouse-like odor of typhus is characteristic.
The tongue is generally moist and soft; sordes of the teeth, etc., is rare.	The tongue is generally dry, hard and brown; and the teeth and gums fuliginous.
Vomiting, generally of bilious matter, is an almost constant and urgent symptom, especially in the first stage.	Vomiting is rare and urgent.
Pains in the spine and limbs of a sharp and lancinating character are usual, and evidently neuralgic.	Pains are dull, heavy, and apparently muscular.
Tetanic spasms in a very large proportion of cases and within the first two or three days. They are due to an inflammatory exudation within the spinal canal.	Tetanic spasms are unknown in typhus. Convulsions sometimes occur, due to "pyæmia.."
Cutaneous hyperæsthesia is a prominent symptom.	The sensibility of the skin is generally blunted.
Strabismus common.	Rare.
The eye, if injected, has a light-red or pinkish color.	The blood in the conjunctival vessels has a dark hue.
The pupils are often unequal.	Always equal.
Deafness often complete and permanent.	Hardly ever permanent, or attended with signs of disorganization of the ear.
Duration very indefinite; but generally from four to seven days.	Duration from twelve to fourteen days.
Relapses are common.	Relapses are rare.
The blood is often highly fibrinous.	The blood is never fibrinous.
The lesions, unless in the most rapid cases, consist of a fibrinous or purulent exudation in the meshes of the cerebro-spinal pia mater.	There are no inflammatory lesions whatever.
Mortality from 20 to 75 per cent.	Mortality from 8 to 40 per cent.

Our space prevents our answering but one other question asked by those who have not yet seen, but every day expect to meet the disease. What *treatment* do you find most satisfactory? The following suggestions, copied from an essay by J. Netten Radcliffe, published in a work upon diseases of the spine and nerves, will furnish in brief as satisfactory an answer as can be given.

"*Prophylactic.*—Ignorance of the true etiology of the disease limits our preventive efforts to general sanitary measures, applicable to all epidemic diseases, for the purification of houses and localities. Mr. J. Simon, recording the conditions under which the disease has prevailed, writes: "I am strongly of opinion that the best sanitary precaution which in the present state of knowledge can be taken against the disease, must consist in care for the ventilation of dwellings." He adds, how-

ever, "that in some cases, according to local reports, the distribution of an epidemic has very decidedly not been governed by conditions of overcrowding and ill ventilation." Dr. B. W. Richardson's suggestion as to the cause of the disease should lead to the careful microscopic examination of all bread-stuffs and farinaceous preparations in use among families and communities where the disease breaks out, and the disuse of such as may be of doubtful character.*

Curative.—The treatment of epidemic cerebro-spinal meningitis is as unsatisfactory as that of cholera. The evidence of the course of the disease having been beneficially affected in any outbreak by the administration of medicine is very doubt-

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Diseased Grain.—Dr. B. W. Richardson has suggested that epidemic cerebro-spinal meningitis may possibly arise from the consumption of diseased grain, after the manner of ergotism, and perhaps acrodynia. He thinks that the probabilities are altogether in favor of the suggestion, that "the cause, in fact, is a diseased grain, or fungus contained in some kinds of flour out of which the bread-stuffs are made. This fungus may not be present in large quantities, and many persons may eat of the food without getting a poisonous part; but one will get it out of a number, and this without any communication beyond the breaking of bread together; this disease may occur in one member of a family, leaving the rest free, and in this irregular way it may be distributed in an epidemic form over a large surface of the country." He adds: "If my hypothesis, as regards cause, be correct, there is little danger of the disorder extending widely in this country; for of our cereals used as food, nearly the whole of the population now select wheat, and our wheat generally is selected for the market with great judgment and circumspection. Any cases, therefore, that might occur would be isolated, and would be easily traced out and prevented." This suggestion opens out an altogether new field of inquiry respecting the origin of the disease, and it demands active and thoughtful consideration in subsequent outbreaks. Dr. H. Day, of Stafford, has endeavored, by experiments on lower animals, to obtain some light on the subject. He fed three rabbits with unsound grain (wheat, oats, ergot of rye, and mouldy bread) with this result: In all the animals a spasmodic affection was produced, and in two inflammatory changes in the right eye, proceeding in one case to ulceration of the cornea, and evacuation of the contents of the globe. One of the rabbits died on the eighth day, the other two were killed on the twelfth day, and in all more or less congestion of the membranes of the spinal cord was found on dissection.

The sum of our knowledge of the etiology of epidemic cerebro-spinal meningitis is this; that the clue to its explanation has not been discovered.

ful. The too common rapid progress of the malady to death, as in cholera, and the nature of the lesions determining death, necessarily set at naught efforts to control it; medicine not being guilty either of inaptitude or inactivity. The control of this disease, as of cholera or trichiniasis, is a question of preventive rather than curative treatment, and must depend upon the discovery and limitation of its cause. In the earlier outbreaks, epidemic cerebro-spinal meningitis was treated as an acute inflammatory affection, by bleeding and purgatives, with the general result that the fatality of the malady was probably invariably augmented. During the recent outbreak in Philadelphia, it was found that, in the more asthenic cases, cupping the nape of the neck was "of essential service in mitigating, and generally, indeed, in wholly removing the neuralgic pains which form so prominent and so severe a symptom in many cases of the disease" (STILLE). When the state of the patient forbade the abstraction of blood, dry-cupping used in the same locality afforded signal relief, and rendered the effects of vesication more prompt and complete. This was the experience of one of the least fatal outbreaks recorded. The experience of the majority of epidemics has been against any bloodletting, local or general. The deduction to be derived as to depletion from the general state of the circulation and the results of practice entirely coïncide. For, as a rule, the pulse from the very outset contra-indicates the withdrawal of blood; and if in any case it should seem from the general symptoms that depletion might exercise some control over the central mischief, a thoughtful regard should be given to the future. The application of *cold* to the head and spine, either by means of ice or a freezing mixture, in Esmarch's India-rubber bags, is not open to the same objection as bloodletting, and has furnished by far the most satisfactory results of all direct treatment of the acute cerebro-spinal symptoms. In its use care should be taken not to prolong the application so as to depress or increase the depression already existing of the whole system. When the acute nervous symptoms are accompanied by marked prostra-

tion, it is advisable during the application of ice to swathe the limbs in hot flannels, pack the legs and thighs with hot-water bottles, or bags filled with hot sand or salt, and cover the abdomen with thick layers of flannel or cotton-wool. From the very outset of the disease, care should be taken to economize the temperature of the body, and anticipate its fall; and in cases characterized by collapse, or much vital depression, the application of external heat in the manner just suggested is a cardinal point of treatment. Of medicaments directly addressed to the nervous symptoms, *opium* is the most valuable. It is especially indicated when there is much restlessness and delirium, sleeplessness, hyperæsthesia, and painful spasm. *Morphia* is the best form of administration, and subcutaneous injection perhaps the best mode. The drug should be given in decided and frequently repeated doses, and carefully watched. Stillé says of its use during the recent outbreak in Philadelphia: "We were in the habit of giving one grain of opium every hour in very severe, and every two hours in moderately severe cases, and in no instance was produced either narcotism or even an approach to that condition. Under the influence of the medicine the pain and spasm subsided, the skin grew warmer, and the pulse fuller, and the entire condition of the patient more hopeful. It seemed probable, however, that the full benefit of the opium treatment could be received by those only who were subjected to it in the early stages of the attack. Direct experience is here in perfect accord with the expectation which a knowledge of the pathological processes involved in the disease would naturally suggest."

A Committee of the American Medical Association has reported favorably of the *sulphate of quinia* in large doses, given at the very beginning of the disease. In some instances the drug seemed to abort the attack. The committee speaks also of the favorable results reported from the combined use of *ergot* and *chloride of iron*. Some American physicians have given *ergot* in combination with *belladonna*, and *belladonna* in combination with *quinine*, but with equivocal benefit. *Mercurials*

have been freely used, particularly in the form of calomel, but their effect has been most questionable, except as purgatives. Their indiscriminate use is to be utterly condemned, and their use at all to be discountenanced. A host of other medicaments have been made use of, of which it is requisite to note only *iodide of potassium*, *bromide of potassium* and *arsenite of potash*. The circumstances under which the two former drugs have been used, and are most likely to prove beneficial, will suggest themselves to the practitioner. It does not appear that any decided good has arisen from their administration. In protracted cases of convalescence the arsenite of potash may prove a valuable remedy.

Of the general treatment of the patient, the hot bath (102°–103°) is, when practicable, the most important. This should be followed, as recommended by the Committee of the American Medical Association, by friction with warm oil of turpentine. The *regimen* should be generous and nutritious from the beginning of the disease. In the acute stages soup of some kind or other, or milk, is needed; and as soon as appetite returns, *solid* viands of any digestible character must be given. In the graver cases where there is much restlessness and spasm or stupor, and food cannot be given by the mouth from the patient's refusal or inability to swallow, an attempt should be made to administer it by the rectum; when there is much thirst, the patient's fierce desire for drinks may be freely indulged. The state of the pulse is the principal guide to the use of *stimulants*. Their administration as a special remedy independently of the indications which generally govern their use has not been followed by good results; but they are called for when the condition of the pulse and the aspect of the patient show manifest flagging of the vital power. The *sequelæ* of the disease must be treated on ordinary principles.

Too frequently the state of the patient as to delirium, spasm, and irritability of the stomach prevents all internal treatment whether by medicine or food, and limits the efforts of the physician to external measures, restricting even their application.

To this unhappy combination of unfortunate and uncontrollable conditions may reasonably be attributed to some extent the inefficacy of the treatment."

Much might be added of personal experience, but for the present this brief outline will suffice. At present, in Buffalo, the severity of attack in new cases is less than at the first outbreak of the disease.—*Buffalo Medical Journal Editorial.*

ART. II.—CASES OF CEREBRO-SPINAL DISEASE IN CHICAGO during the Months of February, March, and April, 1872. Remarks on the Treatment of the same. [Read to the Chicago Medical Society, April 15th, 1872.] By N. S. DAVIS, M. D., etc.

Both personal observation and the statistics of mortality furnished by the Board of Health, show an unusual prevalence of cerebro-spinal disease of a serious nature, in this city during the past two months. For instance, the certificates of death returned to the health office, show 13 deaths from cerebro-spinal meningitis in February, 44 in March, and 22 during the first week in April. This not only indicates an unusual prevalence of cerebro-spinal disease, in the city, but also that it is rapidly increasing. The first case that attracted my attention was that of a young man employed as a clerk in a store, who sent for me on the 1st day of February. He was boarding at 810 Michigan avenue.

He had been attacked two days previous with chilliness and a severe pain in the head, for which he went to a physician who gave him some cathartic medicine. It operated freely on the bowels, but afforded no relief to his head. I found him in a reclining position; some flush of redness in his face, and an expression of suffering; averse to free motions, especially in the head; some general increase of sensibility or hyperæsthesia; temperature moderately increased; pulse 90 per minute, firm, and moderately full; respirations 20, and a little unsteady;

tongue covered with a white coat, but moist; urine free; abdomen natural; mind despondent; and complaining of an intense pain, mostly in the lower part of the anterior region of the head, and extending at times to the occiput. The temperature of those regions of the head and the pulsation in the arteries was greater than in any other parts of the body. The pupils were small, with slight photophobia. The assemblage of symptoms was such as caused me to think that there was positive inflammatory hyperæmia in the base of the brain.

The following day the pain was less intense, but in all other respects the symptoms were unchanged, except the addition of slight stiffness in the muscles of the neck, and complete aphasia. The patient understood whatever was said of him; but, in reply, repeated a number of meaningless words, mostly monosyllables, and often appeared vexed that those around him could not understand him. He was now moved to the house of a friend on Cottage Grove avenue. There, for three days, he claimed to be each day better. He recovered the power of expressing his thoughts, and had less pain in his head. But his neck remained stiff; his pulse variable; mind more dull and wandering, especially during the night. There was less febrile heat: the tongue more clean; the urine more abundant; and he insisted on sitting in his chair and taking some food every day. On the night of the 6th, his symptoms became more aggravated; his head more retracted; mind more dull; pupils considerably dilated; pulse slow and intermitting; respirations very variable; and urine more scanty. On the 8th there was evident hemiplegia, with divergence of one eye; and entire coma followed, ending in death on the morning of the 11th. No *post-mortem* examination was allowed. Since the 1st of February, a period of 72 days, there have occurred in my own practice 40 cases, sufficiently well characterized to render the diagnosis reasonably certain.

I have seen several other cases in consultation with other practitioners during the same period of time. Of the 40 cases here alluded to, 25 were in the South Division, 15 in the West,

and 4 in the North Division of the city. Six were adults between the age of 20 and 30 years; 10 between 5 and 15 years; and 24 were between 6 months and 5 years of age. Of the whole number 7 have died, 27 have recovered, and 6 remain under treatment. Of the latter, one will probably soon terminate fatally, and the other five have a fair prospect of recovery. Of seven deaths, three were adults over 20 years of age; 1 was 5 years, 1 was 3 years, and the remaining 2 six and seven months respectively.

The duration of the disease has varied much. Of the seven fatal cases, one continued 12 days, one 4 days, one 28 days, and one only 20 hours. Three of these cases were brought under treatment at the commencement of the attack; the other four were seen so late as to admit of only from one to three visits each. The cases that recovered have required treatment from one to four weeks each.

Four-fifths of the cases included in this report have occurred among the poor and laboring classes of people, and in a territory or part of the city bounded by East and West Harrison street on the north, south by Twenty-sixth street, east by State street, and west by Centre avenue. Yet one of the most rapidly fatal cases in the list was a little German boy five years of age, living on Wabash avenue, near Fourteenth street, who died within 20 hours from the attack.

In many instances only one child or member of a family has suffered from the disease, while in a few cases three or four in the same family have been prostrated within 24 or 36 hours. In one small house on the rear end of a lot on State street, north of Sixteenth, three children were attacked within the same 24 hours; another was attacked in the house on the front end of the same lot; another in the adjoining house south; and two others in the care of another physcian in the adjoining house north. I have been unable to gather any evidences of the contagiousness or communicability of the disease. The cases have varied much, both in the severity and variety of symptoms, and yet have preserved enough of uniformity to identify them as

belonging to one group, and dependent on some common pathological conditions. For instance, in all the cases the access of the disease is sudden or abrupt. They all give evidence, at first, of unusually severe pain in the head, with very variable neuralgic pains in the distant parts, especially in the abdomen, thighs, and legs; and in from one to three days rigidity of the neck, with some retraction of the head and general hyperæsthesia sufficient to cause even the youngest child to manifest signs of distress on being touched or moved. In nearly all the cases there has been during the first twelve hours active vomiting, increased by raising the head to the erect position, and in some coïncident purging. These gastric and intestinal symptoms have seldom continued beyond the first one or two days. The temperature is generally increased, especially in the back of the head; the pulse frequent and firm; respiration increased in frequency, and, in most cases, panting like one excessively fatigued from severe exercise; face flushed, and expression excited and anxious at first, but subsequently dull, with dilatation of pupils; urine generally scanty and high-colored, but in some cases abundant throughout the whole duration of the disease; tongue covered with a white fur; mouth moist; and after the first one or two days, bowels inclining to constipation, with the abdomen flaccid and entirely free from tympanitis. About one-third of the cases present some red, erythematic spots on the skin between the third and seventh days of the disease. These spots vary much in size and number, as well as in shade of color. In the milder cases they are bright red, and often so few in number as to attract no attention unless looked for particularly, and in others they are so numerous as to create the impression that the case may be one of scarlatina. In the more severe cases the spots are darker in color, larger in size, and in two cases they were accompanied by tumefaction from subcutaneous infiltration, as in erysipelas. In a young woman who died on the fifth day after the attack, but whom I did not see until the day previous to her death, there were numerous large purple hæmorrhagic spots on the lower extremities, and an ob-

long, elevated, purplish red spot from one to two inches long and from half to three-quarters of an inch wide on the front part of each ankle and the outer face of each wrist. The head was held rigidly to one side, eyes divergent, pupils dilated, and mind entirely unconscious. In the majority of cases, however, I failed to discover any special eruptions or spots on the surface. Nearly all the cases manifested during their progress paroxysms of excited delirium; and in the children, the first turns of vomiting would be followed by protracted turns of wild screeching and crying, and sometimes trembling as if under the influence of terrible fright. In only four cases were there general convulsions, three of which died, and one recovered.

In regard to the actual pathology or nature of this form of disease, there is still much obscurity. That it differs from *simple* inflammation of the brain and its membranes, is evident both from the symptoms during life, and the post-mortem appearances after death. I have had the privilege of making only one post-mortem examination this season. It was a case that died in the Mercy Hospital—an adult, brought in already unconscious, with rigidity of the muscles of the neck, and all the evidences of cerebro-spinal disease strongly marked. He died on the third day after admission, being about one week after the attack. Autopsy revealed a few ounces of reddish serum between the arachnoid and pia mater, and in the lateral ventricles, with the most intense and beautiful injection or turgescence of the vessels of the pia mater covering the base of the brain, medulla oblongata and upper part of the spinal cord. The vessels of the brain substance were also fuller than natural, but there was no exudation of lymph or plastic material, and no other morbid appearance apparent to the eye. In a case recently alluded to by the editor of the "Buffalo Medical and Surgical Journal," the autopsy revealed no morbid appearances in the brain or its membranes.

Most of the autopsies reported have given serous, sero-sanguineous, and sero-purulent effusions in moderate quantity, and vascular turgescence, with only slight appearances of plastic

exudation. As a general rule, the more rapid the progress of the case—that is, the earlier the patient dies—the less are the visible post-mortem changes. I have been led to regard the disease as consisting in an exaltation of the susceptibility or irritability of the structure of the cerebro-spinal axis, including the whole base of the brain, with diminished tonicity or contractility of the blood-vessels. If the alteration of the property of susceptibility is intense and extends directly to the centre of the excito-motory system, it cuts short life very speedily, sometimes in a few hours, without leaving visible alterations in the brain or its membranes. But if the morbid action be less intense, or involve less directly the chief excito-motory centre in the medulla oblongata, life may be prolonged until either recovery takes place or the vascular engorgement ends in suffusion of serum, etc.

Treatment.—The first few cases coming under my care were treated with leeches to the temples and mastoid spaces; cold applications to the head; a mild cathartic and full doses of the bromide of potassa aided by hydrate of chloral to procure rest at night. After two or three days iodide of potassa was added to the bromide; counter-irritation applied to the neck. The results of this kind of treatment were not satisfactory.

The cephalalgia, muscular rigidity, etc., continued, and though the febrile action was less, there was no sign of convalescence. The first case died at the end of ten or eleven days. Another, a girl about 11 years of age, had lain with the head firmly retracted to a right angle with the shoulders; the hearing dull; mind wandering; sleepless; and often screeching with pain, for more than a week; and the foregoing remedies, with the addition of alterative doses of calomel and Dover's powder at night, had exerted no marked change in the progress of the case.

Recollecting that the calabar bean had been used with apparent success in tetanus, and that I had used it with benefit in several cases of muscular rigidity from irritation of the nervous centres, I made the following prescription :

℞—Tinct. Calabar bean, ʒ j.;
Fl. ext. Ergot, ʒ jss.

Mix. Gave half a teaspoonful every two hours, and omitted all other medicines. At the end of twenty-four hours the patient was found simply more quiet, the pulse a little slower, and the respiration more regular. The treatment was continued without change. At the end of the second day the patient had ceased to complain of pain in her head, had slept several times for half an hour to an hour; the retraction of the head was decidedly less; mind was clear; the mouth moist; and the urine free; but she seemed feeble. More simple nourishment was ordered, and the medicine continued at intervals of three hours. The case continued steadily to improve; and on the fifth day after the commencement of the use of the calabar bean and ergot, the muscular rigidity had entirely ceased, and the patient was convalescent, though emaciated and feeble. The medicine was continued three times a day several days longer, and a combination of extract of malt and the compound syrup of hypophosphites, in addition to nourishment, were given to aid in restoring nutrition and strength. Since that time I have used the calabar bean, either alone or in combination with ergot, in nearly all the cases that have come under my care, and certainly with more apparent effect in controlling the disease, than by any other remedies I have tried. The following is a brief sketch of one of the more recent cases:

Mr. A——, residing at No. 40 Brown street, on returning from his work at evening, was suddenly attacked with chilliness and violent pain in the forehead, temples and occiput. This was soon followed by febrile reäction and vomiting. Several messages were sent to me, but I did not see him until the afternoon of the following day, when he was found in bed, with the head drawn firmly backward; face flushed; head hot; expression anxious; pupils nearly natural; pulse 100 per minute, soft; respiration hurried and irregular; mouth moist, but tongue covered with a white fur; urine scanty; bowels quiet; but promptly rejecting by vomiting whatever drink was given

him, and making efforts to vomit whenever he was raised up; his mind wandering, and almost constantly crying out with the distracting pain in his head. Cloths wet in cold water had been kept on his head; and I directed the same to be continued, and immediately ordered the two following prescriptions:

℞—Tinct. Calabar bean, ℥ jss.;
Fl. ext. ergot, ℥ ijss.

Mix. One teaspoonful to be given every two hours in half a tablespoonful of water.

℞—Carbolic acid crystals, 6 grs.;
Glycerin, ℥ ss.;
Tinct. gelseminum, ℥ ss.;
Water, ℥ iij.

Mix. One teaspoonful to be given every two hours, alternately with the other, making the medicines come only one hour apart.

Directions were given to have the medicines and drinks given without raising the patient's head from the pillow, to avoid the danger of vomiting. The directions were faithfully executed, and the following day all the symptoms were moderately improved. The treatment was continued with no change except to extend the time between the doses to three hours instead of two.

The same treatment was continued four days, lengthening the interval between the doses of medicine one hour each day. On the fifth day, finding the pain in the head, the muscular rigidity, and the febrile symptoms entirely relieved, the carbolic acid mixture was omitted, the calabar bean and ergot continued three times a day, and a saline laxative ordered to move the bowels. The patient continued to improve, and was up and dressed, apparently entirely convalescent, in eight days. If our views in regard to the essential nature of the morbid action constituting this form of disease are correct, we may expect such remedial agents as have the power to diminish *excitability*, and at the same time increase the vascular tonicity, to exert the most favorable influence over the active stages of its pro-

gress. Such are the calabar bean, cannabis indica, gelseminum, ergot, etc. If the disease coëxists with the prevalence of erysipelas, in the same community, it is probable that the free use of the sulphite of soda in addition to other remedies would be beneficial. I have noticed in several of the patients coming under my care a tendency in the disease to assume a chronic form. The constant pain in the head, the muscular rigidity, and the general febrile symptoms, gradually disappear during the first week or ten days; but the patients have continued pale, weak, subject to transient but severe neuralgic pains, ever changing in their locality, but most frequent at the head of the gastrocnemii muscles, the abdomen and the head; a very peevish, fretful condition of mind; variable appetite; and disturbed sleep. In two or three cases of this kind, a mixture of the tincture of calabar bean and camphorated tincture of opium, given each morning, noon, and teatime, and a moderately full dose of Dover's powder and quinine at bedtime, appeared to produce very decided and permanent relief.

In the active stage of the disease I have not found either opiates or quinine to produce any favorable effects. I have thus given, as briefly as possible, simply the results of my observations in regard to the prevalent cerebro-spinal disease, which may be said to constitute a moderate epidemic.

Note.—As the so-termed spotted fever or cerebro-spinal meningitis is prevailing extensively over large areas of territory extending (with some material exceptions or interruptions) from Buffalo, N. Y., to Vicksburg, Miss., and from Chicago, Ill., to Virginia, the space proper to this department is devoted to papers connected with this subject. They will be read with interest and profit.—Ed.

CLINICAL RECORDS.

"Ex principiis, nascitur probabilitas: ex factis, vero veritas."

ART. I.—REMOVAL OF A LARGE FIBRO-CYSTIC TUMOR OF THE UTERUS BY GASTROTOMY. By T. GAILLARD THOMAS, M. D., Professor of Obstetrics and Diseases of Women and Children in the College of Physicians and Surgeons, New York. Case Recorded by Dr. Matthew D. Mann, House Physician.

E. K., aged twenty-eight, married, living in New Jersey, admitted to the Strangers' Hospital September 24, 1871. Patient has been married ten years, but never been pregnant. Her menses appeared at the usual time, and have always recurred regularly.

A year ago she noticed some swelling in the lower part of her abdomen, originating in the left side. This increased quite slowly during the first six months, and attracted very little attention. Since last spring the growth developed rapidly until its present size. Within a short time she has complained of dyspnœa or orthopnœa, of considerable pain in the back, and of marked debility.

On admission, patient weak but in good spirits; pulse over 100. The abdomen is distended and very tense; the umbilical depression not effaced. There is absence of resonance all over the front of the abdomen up to a point midway between the umbilicus and the ensiform cartilage, and distinct fluctuation. The tumor resembles in shape and size the uterus in the eighth month of pregnancy, and is supposed to be an ovarian cyst requiring immediate measures for relief, on account of the extreme tension and the pain which this induces.

Operation.—On the 25th of September, the patient having been etherized, the tumor was removed by Dr. Thomas, in the presence of Drs. Peaslee, Sands, Draper, Markoe, Brown, and a large number of students. An incision of three inches was made in the median line midway between the umbilicus and pelvis down to the sac. A sound was then swept around the

tumor, which demonstrated the fact that it was free of attachments. The tumor was then tapped, and there flowed away about four quarts of a chocolate-colored fluid, which was found to consist of bloody serum. The wall of the supposed ovarian cyst was found to be so very thick that, after removal of the fluid, difficulty was experienced in withdrawing the sac through the opening. This was, therefore, prolonged to five or six inches, and the sac drawn out. To the surprise of the operator, it was found to be a sac with very thick walls, growing from the fundus uteri, and disconnected with the ovaries, both of which were healthy. The only explanation which could be given of its development, was that a tumor originally solid had undergone cystic degeneration or liquefaction in its centre, and thus taken on a cystic character. Hæmorrhage had unquestionably occurred within the sac thus formed, for a large amount of blood was found to exist in the fluid removed by tapping. The walls of this cyst were estimated as about half an inch thick.

The removal of the tumor presented great difficulties, for no pedicle existed. This was accomplished by that species of enucleation recommended by Dr. Miner, of Buffalo, N. Y. An incision having been made through the outer envelope of the tumor, the operator stripped this back on both sides, and by this means enucleated the tumor. From the walls of the enveloping sac thus left, a good deal of hæmorrhage occurred, but this was controlled by one or two ligatures, free application of solution of persulphate of iron and exposure to the atmosphere. The walls of this envelope of the tumor were then ligated by silk and returned to the abdomen. The abdominal wound was closed by silver sutures, except at the lower extremity, into which a small tent was inserted to facilitate drainage and washing out of the peritoneum, which the operator thought would almost assuredly be demanded.

8 P. M.—Patient recovers slowly from the ether; pulse 108; is kept quiet with morphine.

September 26th.—Doing well; falls asleep every few minutes.

Morphine kept up. During the day pulse increased to 148, but is full and strong. Tent removed and replaced by a perforated rubber tube to allow drainage; bladder emptied every three or four hours.

September 27th.—Pulse 136; patient comfortable; tympanitis developing; some vomiting towards night; her mind is clear and full of hope.

September 28th.—Pulse 132; suffers no pain; tympanitis increased; takes beef tea and milk. 12 M., peritoneum washed out with warm water and hyposulphite of soda, with the reduction of temperature of 2-10°.

September 29th.—Pulse 120, full and strong; smell from slough very offensive; cavity carefully syringed out. Morphine kept up; patient comfortable and quiet.

September 30th.—Doing well; cavity washed.

October 1st.—Syringed every day; some light-colored discharge from the opening.

October 2d.—Continues treatment.

October 3d.—Sutures and clamp removed; firm union; lower part of wound contains a slough one inch in diameter. The rubber tube is still retained to allow a constant drainage, and to facilitate the salt and water injections, which are still continued every day, and to prevent union at that point.

October 4th.—Temperature 100° F. this morning; patient tolerates morphine very well; she takes from 1½ to 2 grains daily without scarcely any impairment to her memory and intellect; abdominal cavity washed out this morning. For the last 24 hours only Oj. of urine was drawn off by the catheter, while at the same time the wound discharges much more clear fluid than before.

October 5th.—About the same. Discharge from abdominal cavity profuse, and has a strong ammoniacal odor, is turbid, contains pus, but no albumen; very little water passed from the bladder, about Oj. in 24 hours. Morphine reduced ¾ grain today; begins to take solid food, and continues beef tea and milk.

October 6*th.*—Discharge from peritoneum examined chemically, and considerable quantity of urea found; fistula supposed to exist either in ureter or bladder. General condition about the same—*i. e.*, favorable.

October 7*th.*—Bladder injected with solution of cochineal, which passed out through the wound in the abdominal cavity; fistula exists in the bladder, supposed to be secondary, and due to sloughing. Treatment consists in raising the body of the patient by elevating the head of the bed, and keeping a retentive catheter in the bladder. Patient ordered an enema, which acted well, and morphine continued.

October 8*th.*—No discharge from abdomen; considerable improvement in her general condition; pulse 121; appetite fair. There is a small bed-sore in the back, probably caused by the offensive discharges from the wound.

October 9*th.*—Some soreness about the meatus; patient lying partly on her side with great relief.

October 10*th.*—Catheter removed, as causing great suffering, and urine drawn off every 3 hours.

October 11*th.*—Discharge from abdomen recommencing; patient sweats profusely. Ordered Æ. sulph. ar. and quin.; also brandy ℥, 3, h.

October 12*th.*—Urine drawn off every 2 hours, and catheter retained as long as patient can bear it. Sore in back healing; pulse getting stronger.

October 13*th.*—Doing well; no discharge; edges of wound healing; a sinus runs down to the pelvis, inclining to the right side. She has had several enemata, and ℥ss. of ol. ricini, followed by numerous large passages. She sweats much less, and the fever is trifling; appetite good; is gaining strength fast.

October 14*th.*—No fever to-day for the first time. Patient feels well enough to sit up a little while in bed to-day; wound in abdomen healing slowly, is still about 1 inch in size, and extends through all the layers of the abdominal walls, tapering to a point as it approaches the peritoneum. At this point a small round opening exists, which leads into a narrow canal;

the latter is traceable for several inches by the probe, and pursues a course already described.

October 16th.—Sitting up to-day; no running from the wound; feels comfortable.

October 18th.—Patient improving very fast; sits up all day; wound entirely closed and granulating nicely.

The following statement gives the temperature (taken in axilla) in this case from September 25th, 1st day of disease, to October 20th, 14th day of disease, Fahrenheit's scale:

The letter M is understood to signify morning, and the letter E evening.

September 26, 2d day, M., 100.5; E., 102.6.
September 27, 3d day, M., 100.8; E., 102.5.
September 28, 4th day, M., 102.8; E., 101.7.
September 29, 5th day, M., 102.5; E., 101.6.
September 30, 6th day, M., 101.4; E. 102.
October 1, 7th day, M., 100.6; E., 100.8.
October 2, 8th day, M., 101.9; E., 101.
October 3, 9th day, M., 101.8; E., 101.
October 4, 10th day, M., 100.1; E., 100.7.
October 5, 11th day, M., 101.2; E., 101.6.
October 6, 12th day, M., 101.3; E., 102.5.
October 7, 13th day, M., 99.7; E., 101.7.
October 8, 14th day, M., 100; E. 102.3.
October 9, 15th day, M., 100.2; E., 101.9.
October 10, 16th day, M., 101.1; E., 100.2.
October 11, 17th day, M., 99.2; E., 98.4.
October 12, 18th day, M., 100.8; E. 101.3.
October 13, 19th day, M., 98.5; E., 98.1.
October 14, 20th day, M., 98.6; E., 98.6.

Pulse Beats per Minute, from September 25th, 1st day, to October 20th, 14th day.

September 25th, 1st day, E., 106.
September 26th, 2d day, M., 126; E., 140.
September 27th, 3d day, M., 136; E., 132.

September 28th, 4th day, M., 132; E., 122.
September 29th, 5th day, M., 130; E., I30.
September 30th, 6th day, M., 130; E., 135.
October 1st, 7th day, M., 120; E., 118.
October 2d, 8th day, M., 128; E., 120.
October 3d, 9th day, M., 120; E., 118.
October 4th, 10th day, M., 120; E., 116.
October 5th, 11th day, M.. 108; E., 125.
October 6th, 12th day, M., 127; E., 128.
October 7th, 13th day, M., 121; E., 123.
October 8th, 14th day, M., 115; E., 120.
October 9th, 15th day, M., I14; E., 120.
October 10th, 16th day, M., 110; E., 117.
October 11th, 17th day, M., 119; E., 105.
October 12th, 18th day, M., 120; E., 110.
October 13th, 19th day, M., 114; E., 102.
October 14th, 20th day, M., 100; E., 90.

Respirations per Minute from Sept. 26th, 2d day, to Oct. 14th, 20th day.

September 26th, 2d day, M., 22; E., 16.
September 27th, 3d day, M., 22; E., 18.
September 28th, 4th day, M., 16; E., 13.
September 29th, 5th day, M., 8; E., 13.
September 30th, 6th day, M., 20; E., 20.
October 1st, 7th day, M., 20; E., 17.
October 2d, 8th day, M., 22; E., 20.
October 3d, 9th day, M., 20; E., 20.
October 4th, 10th day, M., 17; E., 16.
October 5th, 11th day, M., 17; E., 22.
October 6th, 12th day, M., 18; E., 24.
October 7th, 13th day, M., 20; E., 20.
October 8th, 14th day, M., 19; E., 28.
October 9th, 15th day, M., 28; E., 30.
October 10th, 16th day, M., 26; E. 24.
October 11th, 17th day, M., 28; E. 23.

October 12th, 18th day, M., 20; E. 22.
October 13th, 19th day, M., 15; E., 18.
October 14th, 20th day, M., 16; E., 16.

Quantity of Morphia Administered on each day, in grains.

Second day, $2\frac{1}{4}$; third day, 2; fourth day, $1\frac{3}{4}$; fifth day, $1\frac{1}{2}$; sixth day, $1\frac{1}{4}$ seventh day, 2; eighth day, 2; 9th day, $1\frac{3}{4}$; tenth day, $1\frac{1}{4}$; eleventh day, $\frac{3}{4}$; twelfth day, $\frac{1}{2}$; thirteenth day, $\frac{3}{4}$; fourteenth day, 1; fifteenth day, $\frac{1}{4}$; sixteenth day, $\frac{1}{2}$, seventeenth day, $\frac{3}{4}$; eighteenth day, $\frac{1}{2}$.

In a week from this time she was discharged cured. Three months after the operation she presented herself at the hospital, looking fat and healthy. So changed was she in appearance that it was difficult at first to recognize her.

The sac removed was submitted for examination to Dr. Edward Curtis, the Microscopist to the Strangers' Hospital, and the following report was returned by him:

27 Washington Place, New York, Oct. 11, '71.

Dr. T. G. Thomas:

Dear Sir,—The wall of the cyst sent me by Dr. Mann a day or two since for examination, described as having been removed by you from the uterus, I find to be composed of bands of fibrous tissue and smooth muscular fibres, arranged as it were in alternating layers, but with the fibrous element largely in excess. The layers of this latter tissue were tolerably muscular. Very truly yours, Edward Curtis, M. D.

ORIGINAL CORRESPONDENCE.

"Sit mihi Fas scribere audita."

Vienna, Austria, April, 1872.

Mons. A. Legoyt, the well-known French statistician, has recently published a very interesting article on the mortality in Paris previous to and during the late siege.

In order to compare the variations of mortality in large cities and rural districts, and to illustrate the modifications caused by the siege of Paris, M. Legoyt has arranged a table from which the following facts can be deduced: The mortality of the capital of a European State, and of the entire territory of the State, are to each other such, that one case of death occurs in every 43.3 inhabitants in England; 42.2 in France; 44 in Belgium; 37.2 in Holland; 38 in Prussia; 35.3 in Austria; in Russia, 29.5; while in London there is one in 38.9; in Paris, 35.7; in Brussels, 27.5; in Amsterdam, 27.3; in Berlin, 25.2; in Vienna, 21.2; in St. Petersburg, 24.3.

We learn from this table that, as a rule, the mortality of large cities is much greater than that of the country at large; therefore, all who are not compelled to live in towns should rather avoid than seek them. It would also be advisable to keep away all gatherings of human beings which can be dispensed with; industrial establishments which are most directly dependent upon urban markets, poor-houses, prisons, barracks, foundling asylums, etc., etc., should be banished from these foci of disease.

In spite of the great precautions employed by the Prefecture of the Seine, the population of Paris was doubly diminished during the siege, in consequence of the increased mortality and owing to the diminished number of births. In the normal period reaching from June 7th, 1869, to September 17th, 1870, the weekly number of deaths averaged 1,000; but during the ten weeks from September 18th to November 26th, 1870, they amounted to 1,697 per week, and from that time to February 17th, 1871, they rapidly increased to 3,429, and in one week even numbered 4,671. During this period, the average mortality was 4,291 per week. After February 18th, the number diminished rapidly, and during the two weeks, from June 24th to 30th, and from July 1st to 7th, 1871, we find the minimum of 892 to 800, that is, fewer deaths in consequence of the excessive mortality which prevailed before. The mortality of Paris was doubled during the three months of the siege; and

according to Vacher, the number of deaths in 1871, amounted to 99,945, while the general yearly average was 45,000.

Similar deductions hold good for marriages and births; there were married in—

	1870.	1871.
June	1,620	453
July	1,570	1,468
August	1,350	1,881
September	704	1,966

And there were born—

June	4,405	2,965
July	4,734	3,001
August	4,539	2,429
September	4,717	1,729
Average	4,599	2,531

The effects of the diminished number of marriages which took place during the siege are obvious in the second table.

Laying bare the spinal cord for the purpose of stretching the four lower cervical nerves. This operation was performed by Professor Nussbaum, of Munich, a few weeks ago, for the purpose of relieving a patient of anæsthesia and tonic contractions of the muscles of the left upper extremity.

The history of the case is as follows: Rudolf Hailer, a soldier, aged 23 years, took part in the late Franco-German war, and at the battle of Bazailles, was struck with the butt of a musket on the left elbow and on the neck. A few days after the battle, an abscess formed on nape of the neck, but this was cured in a short time. In consequence of the above-mentioned injuries, the patient was soon after afflicted with spasmodic contractions of the left pectoralis major and minor, and of all the flexors of the left arm, forearm, and hand. The muscular contraction was so extreme and persistent that it was utterly impossible to extend the fingers and elbow at the same time. The sensibility of the affected limb was also greatly diminished, but not entirely destroyed. The pricking of a needle on the dorsal surface of the forearm was not felt, deep incisions into the soft tissues caused but slight pain.

Hailer was treated by several excellent physicians, and there

is no rational mode of treatment extant which had not been employed. The constant and interrupted galvanic currents were applied for several months by one of the most expert galvano-therapeutists in Europe, without affording the least relief. Opium, belladonna, mercury, etc., all have been given, both internally and externally, vesicants, gymnastics, baths of every form and variety have been used, but without avail.

Hailer was a model patient, allowing his attending physicians to apply the most disagreeable and painful remedies, saying at the same time that he would rather die than be maimed for life and unable to earn his daily bread.

In the course of treatment he was narcotized several times, and while in that condition, the contracted muscles, as is generally the case, resumed their natural form. At this time a thin board was tied on to the extremity in the hope that this would be sufficient to prevent a repeated contraction. Even before the patient was restored to consciousness the spasmodic muscular contractions again set in, and it was necessary to remove the board and bandages, else deep incisions would be left in the soft tissues. A few hours after anæsthesia, the patient was affected by a slight loss of consciousness and spasmodic extension of all the muscles of the affected limb; this disappeared, however, in the course of a few minutes. Prof. Nussbaum performed subcutaneous tenotomy of several of the extended muscles. He considered the cause of the disease to be an irritation of the motor nerves, the spine also being implicated. Dr. Voit, Professor of Physiology, who was consulted, after a close examination, said that in all probability the seat of the disease was located at the origin of the roots of the motor nerves. After various narcotics had been applied without affording any relief, Prof. Nussbaum, acting upon the above-mentioned opinion, determined to expose all of the affected nerves and to stretch them. As the spinal cord was also affected, he resolved to follow the four superior cervical nerves as far as their exit from the vertebral column, and at this point to extend them, and thus act upon the adjacent spinal cord,

break up any cicatricial tissues which might be attached to the vertebral foramina, and in this manner overcome the spasmodic contractions.

This unique operation was performed in all of its details, and as soon as the patient had recovered from the influence of chloroform, it was possible to extend and flex the forearm and fingers without difficulty. The integument covering the affected limb, which previous to the operation was almost totally insensible to external influence, was now so sensible that every touch was felt.

Hailer's condition improved from hour to hour. The muscles which formerly were as hard as stone, have gradually become softer and more pliable, and now answer to every impulse of the will. The patient, with the help of proper nourishment, galvanism, and active and passive motion, will soon be restored to perfect health.

The pathology and treatment of tabes dorsalis (ataxia locomotrice) has for some years past attracted the attention of investigators, and while the morbid changes taking place during the progress of the disease have been pretty accurately ascertained, the various modes of treatment employed have given no satisfactory results. The statement made by Romberg some years ago, that tabes is an incurable disease, is still believed in by the great majority of physicians.

Dr. von Kraft-Ebeling, a leading German electro-therapeutist, has recently published an article on this subject, in which he endeavors to prove that with the help of electricity this disease can sometimes be cured, and in many cases can be checked in its progress.

He says that no case of tabes dorsalis should be dismissed as incurable, before the galvanic current has been employed, more so as the application of this remedial agent can do no possible harm, and as we can ascertain, after its application, whether any benefit is to be hoped for.

Kraft-Ebeling is of the opinion that the beneficial influence of the galvanic current consists in the catalytic changes which

it causes, thus checking exudative processes and diminishing hyperæmia.

Those parts of the nervous apparatus which have already become atrophied are not influenced by the galvanic current; it has no effect upon the metamorphosis of degenerated nerve fibres, nor does it check the degenerative process.

Convinced of the catalytic action of the galvanic current, our author recommends the simple application of the stabile current so as to act upon the spinal cord. One pole is to be applied to the sacrum, the other either to the lumbar-dorsal or cervical portion of the spinal column, as the symptoms may indicate. The intensity of the current should be as great as the patient can bear with ease, and the daily sittings should not occupy more than six or eight minutes.

In regard to the use of the warm baths, Kraft-Ebeling accepts the views of other neuro-pathologists who say that baths which have a temperature of more than 26° R. (90.5° Fahr.) do more harm than good.

In support of his views the author cites four cases which owe their entire recovery to the galvanic current.

R. C. Brandeis, M. D.

Fort Worth, Texas, April, 1872.

Editor of Richmond and Louisville Medical Journal:

Dear Sir,—The article of Dr. T. P. Satterwhite, in your Journal for April, on "Pericardial Effusion," brings to my mind a case which I saw in the winter of 1860–61, while a student in New Orleans. (Medical Department University of Louisiana).

On going into the lecture-room of Professor Richardson, of the Chair of Anatomy, one day, the class saw sitting on the table two deep dishes of a purulent or almost pultaceous substance, which Professor Richardson told us came from the pericardium of the subject on the table, which had been prepared for his anatomical demonstrations. He afterwards took out with a sponge more of the same substance, making in all not

less than a quart, and my present impression is that the amount was nearer a half gallon, though this impression is not very definite, as this was at a time when my mind was being *stuffed* with a greater amount of material than it could well appropriate.

Professor Richardson had no history of the case, as the subject had been procured from the "dead-house" of the Charity Hospital with other material for the "dissecting-room."

A few days before I had seen in the Charity Hospital a case with well-marked "to-and-fro" sound, which I surmise was the case in question, as this latter had disappeared from the ward.

As this occurred during the exciting times just prior to the war, I think it likely the case has never been reported; hence this report.

Very respectfully,

J. L. Van Zandt, M. D.

Louisville, May, 1872.

Prof. E. S. Gaillard:

In your notice of the proceedings of the State Medical Society, the following language appears:

"According to appointment, Dr. Frazee rose to read a paper on the Mineral Waters of Kentucky.

"Dr. Ronald moved that he be not allowed to read his paper, on the ground that Dr. Frazee did not hold himself amenable to the code of ethics.

"Dr. Gaillard said that Dr. Frazee had a right to read his paper, in accordance with a vote of the Society, cast on the day previous.

"The Chair so decided.

"The house being appealed to, the decision of the Chair was sustained by a vote; and Dr. Frazee, after making a few remarks in defense of his professional standing, read his paper, which was referred to the Committee on Publication."

The above report is correct, so far as it goes, but it fails to state that the paper in question was a report I was appointed to make at a previous meeting of the Society, and in reading it

I was simply as a member performing a duty assigned to me by the Society.

Let me further say, that Dr. Ronald having had ample time to prefer charges against me, if he had any to prefer, and having failed to do so, had no right to object to the reading of my report. I consider his motion, based, as it was, simply upon the details of a private conversation held some twelve months before, as illiberal toward myself, and an offense to the good sense of the Society.

From the overwhelming vote by which this motion was defeated, I infer the Society held the same opinion in regard to the matter as myself. Yours,

L. J. Frazee, M. D.

Norfolk, Va., March 20th, 1872.

Editor of the Richmond and Louisville Medical Journal:

Dear Sir,—In the January number of your Journal, under the caption, "Some Remarks on Cotton Root (*Gossypium Herbaceum*)," Dr. Robert E. Peyton, of Virginia, states that he has been unable to find mention of cotton root as a medicine, save in "Tilden's Journal of Materia Medica" and in "Dunglison's Medical Dictionary."

If my memory serves me correctly, the medical properties of the plant in question have been noticed in the "Richmond and Louisville Medical Journal" on more than one occasion. But be this as it may, Dunglison, in his work on "Therapeutics and Materia Medica," places cotton root under the head of "Special Parturifacients." More than thirty years ago, this article, as a remedial agent, was publicly noticed by Dr. Bouchelle, of Mississippi, who declared it very valuable as an emmenagogue, and ascribed to it parturifacient virtue equal to that of ergot. In "Confederate days," when quinine was scarce and costly, a decoction of the bark of the cotton root was employed as an anti-periodic in the Southern States. By reference to the last (1870) edition of the "Dispensatory" of Wood & Bache, it will be seen that attention has been called to the medical pro-

perties of this plant by Drs. Shaw, of Tennessee; Bellamy, of Georgia; and Davis, of Florida. Dr. Peyton, in quoting from "Dunglison's Medical Dictionary," makes that author say: "The cotton *wood* is used in medicine in making moxas." The correct reading is cotton *wool*, by which, I presume, is meant the cotton filaments, or "raw cotton," as it is termed in the older editions of the Dispensatories.

Very respectfully,

W. H. Shepherd, M. D.

Gossypium.

Crysatl Springs, Miss., May, 1872.

Dr. Gaillard:

I was born and raised thirty miles from Vicksburg; don't live more than fifty miles from there now; am familiar with the daily habits of and medical practice among cotton-field negroes; can think back twenty-five years.

Since as far back as I can remember up to this day, it has been as common among negroes to use gossypium to produce abortion as was their desire to have that result take place.

That young, healthy, well-formed women frequently abort, I know! The old ones always say the one aborting has been drinking cotton tea. The aborters generally recover perfectly, speedily. Their general health is not injured. They are not prone to subsequent abortions.

I have, in labor, or where miscarriage was unavoidable, after good ergot had failed to increase or bring back uterine contractions, used the gossypium, but *always* without success. I have never used the gossypium except where the ergot had failed.

If any desire to experiment, the following decoctions are sometimes used by the above class to bring about abortion: Gossypium radix; gossypium semen; pollypoden folium; or hydropiper folium. The last named is frequently used in amenorrhœa. It is sometimes kept in form of tincture. I prefer the standard remedies.

Respectfully,

Geo. Sumrall, M. D.

COLUMBIA, S. C., 1872.

Dr. E. S. Gaillard:

Dear Sir,—I see an article in your Journal for January last, entitled "Some Remarks on Cotton Root (*Gossypium Herbaceum*)," by Robert E. Peyton, M. D., Fauquier, Va. He gives some cases illustrating its emmenagogue and parturient powers, and its efficiency in dysmenorrhœa; and while commending it in the highest terms, he says: "I have spoken of it to numbers of physicians, but have yet to meet the first one who had ever heard of its medicinal qualities. I have examined all the treatise on materia medica and therapeutics that I could lay my hands on, and I have found it mentioned in none of them. Nor have I seen it named in any other Journal than Tilden's, save that it was once casually mentioned in one of your excerpts."

I claim to have first directed attention of the Profession to the medicinal qualities of the cotton root (*gossypium herbaceum*), in an article published in the "Charleston Medical Journal and Review," some time in the year 1851, I think in one of the earlier numbers of that year. In that article I stated that the negro women were using this substance as well as the mistletoe (*viscum album*), in decoction, to procure abortion; and that the parturient properties of the cotton root, thus used, had proven so powerful as to have caused several deaths, as authenticated by Dr. Thomas R. Centre. I have more than once given the mistletoe in decoction to the inferior animals to expel retained placenta, with success.

I will endeavor to procure for your satisfaction and reference a copy of the said Journal; and, in the meantime, ask that you publish these facts, as related, in your next issue.

Very respectfully and truly yours,

E. B. TURNIPSEED, M. D.

COTTON ROOT (GOSSYPIUM HERBACEUM).

NEAR THE PLAINS, FAUQUIER COUNTY, VA., May 3, 1872.

Dr. E. S. Gaillard:

Dear Sir,—Your correspondent, Dr. W. T. Simonton, of Shannon, Miss., does not understand my meaning, when he says I do injustice to the Profession by my remark upon the general ignorance, which has heretofore existed, of the medicinal virtues of the cotton root. I did not intend to include the physicians nor journals of the Cotton States, for it is from them that Tilden's Journal derived its information, as I supposed any one would infer. It quotes from the brothers Shaw, of Tennessee, Drs. Frost, of Charleston, Davis, of Monticello, S. C. Bouchelle and McGown of Mississippi, Travis, of Tennessee; Tully, who received his information from a young physician of Connecticut, who had lived in Louisiana, and Cabell and Mettauer, of Virginia.

But though its virtues had been long known in the *South*, I could find no mention of them in the Edinburgh nor American Dispensatories; nor in the treatises of Materia Medica by Paris, Pareira, Chapman, Eberle, Bell, nor Stillé; nor in the "United States Dispensatory." I refer, of course, to editions in my possession. I was the more surprised at this, because for the last ninety years many students from the South have attended the medical schools of the Northern and Middle States; and not a few those of Europe and Great Britain, from whom the information might have been received. Finding, too, that public attention had been for eight or ten years called to this substance by Tilden's Journal; that the apothecaries of Alexandria and Washington, and some of their most learned physicians, and others of this part of the country had not heard of it, I felt justified in the remarks which I made. Very respectfully yours,

ROBERT E. PEYTON, M. D.

LOUISBURG, N. C., 1872.

Dear Doctor,—I have tried tinct. of gelseminum in my case

of epilepsy without effect. I now give the patient bromide of sodium.

I have experimented lately with carb. ammonia in pneumonia as recommended by A. Patton, M. D., of Vincennes, Ind., in your June number, 1871. I selected three cases in youths about fourteen or fifteen years of age. Symptoms were well marked in each case; very high fever, pain in the chest, furred tongue, rusty or bloody sputa, etc. The first I treated with calomel, tart. ant. and sweet spirits nitre; turpentine stupes to chest and blistering. The crisis appeared on the eighth day. The other two were treated with active purging with compound cathartic pill, then carb. ammonia, and, to procure rest, sweet spirits nitre and paragoric at night; turpentine stupes, tincture iodine, mustard poultices, and, in one case, a blister to the chest. The crisis in those two cases appeared on the sixth day. The carb. ammonia keeps the skin constantly moist with perspiration, which towards the close of the attack becomes profuse.

I think convalescence progressed more rapidly in the two last than in the first. Very truly yours,

William R. King, M. D.

Glennville, Ala., March 8, 1872.

Dr. E. S. Gaillard, Louisville, Ky.:

I am a great sufferer from one of the most annoying of all diseases with which I am acquainted—viz., *catarrh æstivus*, or hay fever, so called. Though why so called I havn't the least idea. Since according to my experience, and that of the unfortunate few who have been afflicted with it, and with whom I have conversed, hay has very little to do with it; no more in fact than any other substance which, when agitated, will give off volumes of *dust*. Ah! thou awful paroxysm of sneezing (often forty sneezes in succession), the clear scalding secretion of the schneiderian membrane which drops, oftentimes before you can get your handkerchief out, on your book or clothing much to your mortification if friends or strangers happen to be present, and the itching and burning around the alæ and up in the nos-

trils; and how sore they become from the blowings, and sneezings, and wipings, until you dread the touch of your handkerchief, cold and wet, almost as if wrung out of water. And how pleasant a freshly-ironed, half-worn old silk handkerchief feels. Then the acutely painful itching of the eyes, especially the inner canthus, and the outer canthus and the orbit and the lids, the lachrymal ducts, and in fact the whole concern; for I can't stop, as the recollection crowds upon me of the distress felt in each and every part and appendage of sight and smell. How I hate dust; how I shun a drug store compounding Dover's powders, or in any way using ipecac. I verily believe *dust* and *ipecac* would bring on an attack even in mid-winter. I never allow a broom to be used in my presence. After the attack has fairly set in, how I dread the light. The glare of the sun is almost like fire to my inflamed eyes; the intense light on my sensitive retina sets up a reflex sneezing, and the sneezing, all the concomitants mentioned above. So you can imagine my misery in summer when compelled to drive for several hours about midday over a dusty thoroughfare, with a hot southern sun pouring down with its concentrated rays on our white sandy streets, the reflected rays being almost as powerful as the direct. At times I very nearly wish that "Fiat Lux" had never been spoken, and that even the flood had continued until the present day.

As to treatment, a darkened room and ice-bags laid over my eyes and along the nostrils on either side, afford me the only relief I ever experience; and this is only temporary, and the intense cold congests my schneiderian membrane so that I can't breath through it, and from keeping my mouth open, my tongue and buccal membrane become dry and hard, so that I can scarcely speak, and I awake, if I am asleep. Especially does this trouble me at night. Anodynes, while they fail to procure sleep, invariably increase my wretchedness next day. In one respect I differ from most other sufferers—that is, I want to be in the draft *all the time.* I suffer less at night when sleeping almost in a window, with the wind blowing directly

on me. It is when I am hot that I suffer most; when I am perspiring that I sneeze the hardest. I would like to impress on you that mine is a disease caused *frequently* by intense heat; *never* by sudden cooling off when heated, as in common colds.

Several authors writing on this disease (among them Dr. W. C. Roberts, in the New York Medical Gazette of October 8th, 1870), say that only aristocrats suffer from it; but oh how gladly would we yield up our privilege. I imagine that William IV., Southey, Webster, Beecher, and even some M. D.'s, I know of, would willingly become one of the "commune vulgus," the "oi polloi," as regards this matter, at least.

Medicine does me no good; I have frequently *aborted* an attack early in the spring with large doses of morphine, but as the sun grows warmer, the dust thicker, all creation can't stop it. Phosphoric acid and quinine at times seem to ameliorate my suffering; most often they are entirely devoid of effect.

I didn't intend writing so much when I commenced, but have been irresistibly drawn on by the hope that you may know of some remedies yourself, or may hear of some by laying the matter before your many readers. Yours,

W. W. Mitchell, M. D.

Note.—Who has found a remedy for this trouble?—Ed.

REVIEWS AND BIBLIOGRAPHICAL NOTICES.

"Judex damnatur cum nocens absolvitur."

Earth as a Topical Application in Surgery. By Addinell Hewson, M. D., one of the Surgeons of the Pennsylvania Hospital, with Four Photo-Relief Illustrations. Philadelphia: Lindsay & Blakiston. 1872.

This subject, which is treated of in this work, has deservedly received much attention in recent years. By no one has it been as thoroughly studied and honestly investigated as by Dr.

Hewson. The whole work bears the evidence of the entire honesty and fidelity which have marked the researches of the author. The results have, as a rule, been more than successful; at times they have been most remarkable.

This work is not a mere record of the results of experiments; it is a scientific analysis and presentation of the subject. The chemical, physical, physiological, and pathological laws involved receive careful and efficient attention. The modus operandi of the forces at work is carefully investigated; and investigated scientifically. The tests made by Dr. Hewson have been of the very severest character, and the results have been eminently satisfactory. One may form a just estimate of the character of this work by learning that the following subjects receive scientific investigation: Effects as to the contact of the earth with the parts; effects on the pain naturally incident to each case; the power and rationale of earth as a deodorizer; its influence upon the progress of inflammation; the influence over the healing process. In all of these examinations, the author is just, careful, and conscientious. The history of the subject is incidentally examined, and not only is it apparent to those who have not paid any attention to this matter, that the use of earth for many of the purposes indicated is old and well known, but it is also shown that much of these valuable secrets has been learned by inferior animals through the faculty of instinct, while man, with all of his higher powers, has been blundering to his conclusions, through tedious observation, and by protracted and complex methods of analysis and experimentation. Verily Darwin and his confiding admirers may find in the history of this subject much more convincing arguments of their assumed ancestry of man, than is to be found in one of their childish explanations as to "development" by stating that the developing beauty of the plumage of male birds is due to the "selection" of the handsomer-feathered gallants by the females of the bird tribe; foolish virgins who, like their human sisters, have been often and fatuously attracted by the gaudy apparel, the stripes and coloring in which their vain

admirers present their claims for affiliation and subsequent happiness. While man has his tables of humus, and gypsum, and argillaceous earth, and silica, etc., and by their aid is laboriously testing the antiseptic and deodorizing properties of each, fearing error, and blind in the very light of truth, his ancestry, the dog, the fox, and the cat, etc., have known at once by intuition what he seeks through vain and complex study!! These lower animals, as man loves to term them, if they desire to hide the smell as well as the substance of an unfinished repast, go forthwith to the proper soil and bury it until it is again demanded, while their degenerate posterity, beginning to learn this secret, grope yet in the dark in search of light!!! Who shall say that man has not learned much of this wisdom from such ancestry, and that he has not even degenerated in the promptness and certainty of a safe conclusion in his experimental searches after truth. Where the wolf or the dog, however, learned the secret that earth is an antiseptic and a disinfectant, it is undeniable that they have daily practiced in this department of science; and it is equally certain that long before man, the being of science, etc., possessed this wisdom, the so-termed inferior animals were reaping the benefits of its practical application! Mr. Darwin will undoubtedly now explain the origin of man's chemical propensities, and ascribe the astuteness of the chemist to a sagacity inherited from a canine ancestry!! The argument would certainly be as respectable as any that he and his followers have so far offered.

Dr. Hewson's experiments are not only valuable in teaching most valuable lessons, but they are even more valuable in the accompanying explanations as to the modus operandi of the forces involved. He has used earth as a dressing with extraordinary effect in primary amputations; resections; comminuted fractures; gangrene; scirrhus; epithelioma; burns; recent wounds; erysipelas, etc. His tests have been crucial; his results valuable and extraordinary. He has had to contend with prejudice, jealousies, suspicion, and the host of evils which beset an honest and determined investigator of valuable truth.

His work is one of rare interest and value. It should be purchased by every reader. It is published in the most unexceptionable manner, as are all of the works issued by the House, who have undertaken its management and contributed so much to its success. It is beautifully illustrated. There is but one closing comment for the reviewer to make, and that is, that every physician should own and study this volume.

THE HISTORY OF MEDICINE FROM THE EARLIEST AGES TO THE COMMENCEMENT OF THE NINETEENTH CENTURY. By ROBLEY DUNGLISON, M. D., LL. D., etc. Arranged and Edited by RICHARD J. DUNGLISON, M. D. Philadelphia: Lindsay & Blakiston. 1872.

This posthumous work of Professor Robley Dunglison has been looked for with much pleasure. It was a work much needed, and it is only just to say that there are few who could present so acceptable a volume on this subject. Dr. Dunglison's work hast just been issued.

To the plodding practitioner; the routinist; the pill, pestle and mortar gentlemen; to the medical tradesman; and to those who estimate the value of the science of medicine by the measure of the balance which it can place to the credit side of their bank account, such a work is uninteresting indeed; but to the true men of medical science, those who value medicine for its past as well as its present; who take a pride in its heirlooms, its triumphs, its obstacles overcome, and its victories won; to the true soldiers who honor their banner and do not, as hirelings, enlist under its folds for a price, regardless of the cause and its advocacy, this work is of inestimable value. It appertains to the medical shrine, and is unstained with the medical marketplace. It is not for the Hessians in medicine, but for those who love the cause which they value and honor; whether their money reward be princely in amount, or whether it be that of the humblest private in the medical ranks.

When a crowd had once gathered in the refectory of a Dominican monastery at Florence, the great painting of the Lord's Supper (by Leonardo da Vinci) was accidentally shaken,

and some of the classic pigments fell upon the tesselated floor; an enthusiastic artist stepped quickly forward and gathered, as a prize, the precious relic of the departed master whose name he so honored, and whose history was so dear to him; the vulgar herd, however, jeered him and laughed at his stupid hoarding of what they termed useless and antiquated dust. Is this not an allegory with which to illustrate that familiar vice of this century, whose representatives repudiate the precious relics of the past, while they treasure, with an almost imbecile fervor, all of the present that can be transmuted into mercantile gold? Those physicians who seek to use books only as tools in trade had best never purchase this late work of Dr. Dunglison, but it is recommended unqualifiedly to those who would learn the past history of their art; who would know something of those great ones who carried so valliantly and so well the great banner which has been committed to the keeping of their successors. To such physicians this work will be a treasure; here is the great story of medicine; the story of its cradle; its nursery, and its early development; here the history of its great marches; the battle-fields; the victories; the disasters; here a great one went down in the strife, struggling for the truth; there in the field is a brief memorial epitaph; here some humble private first attracted attention in the grand army, and afterwards became one of its honored commanders; there are memorial tributes to those who have won their claim to just distinction. Everywhere there is the beautiful lesson, that the Future to the great ones in science is a faithful mausoleum wherein are perpetually embalmed the sacred relics of personal and professional greatness; for centuries after the death of those medically great, here in this memorial offering of Dr. Dunglison one finds embalmed the evidences of noble lives and the fruits of splendid achievements.

There was a great need for such a work, and the work presented will be most warmly welcomed. It presents a most wonderful amount of knowledge in the most agreeable manner, and in a space that one would have believed to be impossible.

The work was chiefly written by Dr. Dunglison when he was one of the medical staff in the University of Virginia. What his labors were at that time no one can realize. This record of his research would alone be sufficient evidence of great energy, but he was at that time filling the following positions in that great school: Professor of Anatomy; Surgery; History of the Progress and Theories of Medicine; Physiology; Materia Medica; and Pharmacy. To have undertaken such work, and yet to have found time wherein to prepare this volume under review, evidences a moral, mental, and physical power almost unequaled. Dr. Richard J. Dunglison, the son of this most honored and indefatigable teacher, edits the volume issued. He has done this very commendably. The publishers have issued the volume in a most excellent manner. The work is a small octavo of only 275 pages. It is safe to say that it will be largely purchased and permanently prized.

LECTURES ON AURAL CATARRH OR THE COMMONEST FORMS OF DEAFNESS AND THEIR CURE. By P. ALLEN, M. D. Edinburgh: William Wood & Co., New York.

This little work is just what the great mass of practitioners desire; some definite views from one of experience as to the many forms of deafness and the best methods of treating each variety. The work is a small octavo of 275 pages. It is carefully written; diction good; style clear; views presented in concise and simple language. The cost is small. The publishers have issued the work on good paper, and with a clear and acceptable text.

THE URINE AND ITS DERANGEMENTS. By GEORGE HARLEY, M. D., F. R. S. Philadelphia: Lindsay & Blakiston. 1872.

This is the most recent work on the urine. The study of the subject is universal in interest. All physicians must learn it, or be mere pretenders and charlatans. There are of course many manuals; and there are many methods of presenting the subject for study. Dr. Harley's method is excellent. As an authority he is too well known and recognized to need endorse-

ment. One of the attractions in this volume is the beauty, clearness, and correctness of the plates. The publishers have discharged their duty well. The work is fully recommended.

THE PHYSIOLOGICAL AND THERAPEUTICAL ACTION OF THE BROMIDE OF POTASSIUM, BROMIDE OF AMMONIUM, BROMIDE OF SODIUM, AND BROMIDE OF LITHIUM. By EDWARD H. S. CLARK, M. D., and ROBERT AMORY, M. D. Boston: James Campbell. 1872.

The Profession have had such repeated literary doses of the bromides in all of the Journals, in Societies, and in most of the modern text-books, that any one who writes upon these subjects, and still more, any one who calls attention to these writings is regarded more as an enemy than as a friend. The Journals have for six years been adorned, illustrated, and liveried with the bromide materials in almost every conceivable shape and complexity of structure. As a result, students (old and young) have somewhat the feeling of one suffering from a nightmare, if they endeavor to remember, grasp, arrange, utilize, and digest this miscellaneous, multiform and heterogeneous mass. The bromide epidemic has attacked every editor and practitioner, and like all epidemics, it has had its period of invasion, culmination, and comparative departure. It seems then unkind to induce its stay and present it again for study and utility. Yet one can not examine this little work without writing something more of the bromides, and recommending each reader to draw new stores from this new field, for future consumption.

The plan of this work is simply to examine the physiological effects of the bromides, to give the results of actual experiments, and to base, upon these, deductions for therapeutic and clinical guidance. A most excellent plan.

It is, of course, impracticable to give in this brief notice a sketch of the experiments, or a list of all the deductions; the most valuable of the teachings, however, are those most needed, and these are as follows: Absorption is rapid, the bromides appearing in the urine fifteen minutes after ingestion; dilution is

necessary to induce rapid absorption and to protect the mucous structures; elimination rapid, completed even when large doses are given, in eight to ten hours, hence the necessity of doses being administered three or four times in every twenty-four hours, to keep the patient under the influence of the medicine, this in epilepsy, etc., is very important; contra-indicated in the irritation and irritability of gastro-intestinal mucous structures; there should be given at least one drachm of water to every grain of the medicine; if given during digestion, at the time when the stomach is active and acid, the salt is decomposed and the bromine is set free, hence, if given at this time, some alkali, as recommended by Brown Séquard, should be combined with the dose, the carbonate of ammonia or carbonate of soda being most advisable; the powder or a strong solution is a great irritant, and in the quaint language of the authors, the mucous membrane of the stomach "does not like it in this shape," and "the rectum does not fancy, any more than the stomach, the irritating solution;" hypodermically given bromides produce abscesses; stomach should be empty and free from acid, if possible, when any dose is given; skin does not absorb the bromides to any useful extent, unless the temperature of the solution is below 75° F.; bromides produce contraction of the arterioles of the brain and cord, hence a spanæmic or anæmic condition contra-indicates the hypnotic use of the medicine, while congestion, hyperæmia, or even plethora of the brain and cord vessels, indicate the employment of the bromides, it being well understood that both too much and too little blood in the brain prevents sleep; the bromides act chiefly upon the vaso-motor nerves, thus producing vascular oligæmia; excito-motory and reflex sensibility are controlled materially by their use; they do not prevent histogenesis; do not increase destructive tissue metamorphosis, if combined with the blood and nerve tonics; unless so combined, emaciation and tissue degradation result; enormous doses, taken without danger, an ounce or more being frequently taken in the twenty-four hours with impunity; the physiological group of symptoms and effects are

sleep, anæsthesia of reflex power of fauces, reflex anæsthesia of excito-urinary organs, diminished reflex sensibility of the system generally, contraction of cerebro-spinal arterioles, repression of general nervous excitability, control of reflex convulsions; pathological symptoms and effects, acne, salivation, aphonia, slow respiration, slow and feeble pulse, tottering gait, cerebro-spinal anæmia, general paralysis, hallucinations, mania, diminished temperature, cessation of cardiac action, death; bromism the technology for this last group; coffee diminishes bromism; strychnia destroys or antagonizes the action of the bromides on the spinal cord, but does not lessen its action on the brain; bromide of potassium, in large doses, is the best antidote for strychnia; specific for headaches generally, though those caused by constipation, colds, fevers, etc., are not materially benefitted by their use; anæsthesia of the fauces and uvula tested by applying spoon or feather, is Bernard's method of determining the fullest physiological effects of the bromides, etc. etc.

Bromide of ammonium is in no respect superior to bromide of potassium, though when these are combined much larger doses and longer continued may be given without inducing bromism; so much has been sensationally written about the bromide of ammonium that it is a satisfaction to know that its chief value is in preventing bromism by being combined with the bromide of potassium. It is more unpleasant to the patient, and has no superior value, not even in inducing the faucial hyperæsthesia so vaunted in the treatment of pertussis.

The bromide of lithium is by far the richest salt of bromine; it contains 92 per cent. of bromine, while the bromide of potassium contains only 66 per cent. It is a more speedy, enduring, and profound hypnotic. It may be used wherever the other bromides are indicated. Its chief objection is that the cost is much greater. Like all of the bromides, when injudiciously given, it produces bromism.

The bromide of sodium has no special or peculiar value. Its therapeutic power is less than that of others of the same family.

It is noticeable chiefly from the fact that its taste is less unpleasant.

The work is closed with some very valuable and interesting physiological experiments, though these teach nothing that is not embodied in this brief review.

This little work, it is seen, can be fully recommended; it costs little; it is concise; lucid; physiologically and therapeutically instructive; embodies much if not all of the valuable material scattered over the vast field of journalism; it is pleasantly written; well printed and well bound. It sustains very much of what has been claimed to be valuable in the administration of the bromides, and, as is equally welcome, it gives a quietus to the untenable assertions of clinical experimentalists and visionary enthusiasts. It demonstrates that the bromides are not a panacea; that they are not a specific; but that they are very valuable medicines if well used, and the best directions for their use are here well and clearly given.

MEMORANDA OF POISONS. By the late THOMAS HAWKES TANNER, M. D., F. R. S. Third Edition. Lindsay & Blakiston. 1872.

This is a small duodecimo of 150 pages. Its popularity has been such that it has reached its third edition. But little of the previous editions remain; the work has been almost rewritten. In its present shape it is not only a clinical guide in practical toxicology, but it has become an excellent manual for the study of poisons. The old subdivision of poisons into irritants, narcotics, and narcotico-irritants, has been repudiated, and a plan somewhat similar to that of Dr. Guy has been adopted; the classification used is as follows: Corrosives; simple irritants, mineral, vegetable and animal; irritant gases; specific irritants, mineral, vegetable and animal; neurotics subdivided into narcotics, anæsthetics, inebriants, deliriants, convulsives, disinfectants, asphyxiants, and abortives. This classification is somewhat complex, but the work is a very excellent and convenient little guide over this pons asinorum of the medical territory.

Trial of Mrs. Elizabeth T. Wharton on the Charge of Poisoning General W. S. Ketchum. [Reported and Published by the "Baltimore Gazette," Baltimore Md.]

This celebrated trial has created universal interest. Next to the Palmer trial, it may be regarded as equal to any in medical literature. The relations and elements were so multiform and complex; the sex of the prisoner; the enormity of the alleged guilt; the toxicological, therapeutical and clinical testimony; the suspicion attaching to some of the witnesses; the cerebro-spinal meningitis epidemic so marvellously and coïncidently prevailing when the deed alleged was executed; the political aspects presented, and the result, all serve to render it a case of remarkable interest. As a paper upon this subject will appear in this Journal, nothing more will be stated at present. The proceedings have been published in pamphlet form, and it may be obtained by sending the proper order to the "Baltimore Medical Gazette." The investment necessary (about 50c.) will be well made.

Statement of Facts in Regard to the Controversy between the Late Faculty of the Atlanta Medical College and Certain Members of the Georgia Medical Association. Atlanta, Ga.: Georgia Book and Job Printing-Office.

This is an interesting exposition of many facts hitherto concealed from the public. The attack upon the Georgia College, it is alleged, was due to action taken by Dr. G. G. Crawford, a former Demonstrator, who was expelled "for unfaithfulness and incompetency," and by "Dr. Thomas S. Powell, expelled from the Faculty on account of unprofessional conduct, and particularly the constant and persistent publication of himself (in one or more newspapers, in connection with what he called 'A Ladies' Home,') as peculiarly skilled in the treatment of diseases of females, having indeed established a newspaper devoted especially to this purpose; rendering himself thus odious to the Profession throughout the State and county, and damaging the reputation of the Atlanta College," with which he was then connected. From a published extract from the minute-book of

the Faculty, it seems that when Dr. Powell was expelled for this flagrant breach of ethics and propriety, the Faculty and the Profession regarded his 'Ladies' Home' (advertised by Dr. Powell in the newspapers, and in a little paper established by himself for the purpose,) as a fraud upon the public; in this published extract from the Faculty minute-book, one reads this record, approved by the Faculty, in regard to Dr. Powell, "the accusations against Dr. Powell are generally entertained, and the institution in question is generally regarded as an imposition upon the public."

It may well be understood that the Faculty of the College hesitated long before giving to the public this overwhelming evidence of the disgraceful action and alleged frauds of a late colleague.

Dr. Powell is now the chief editor of the "Georgia Medical Companion," and wonderful as it may seem, he writes on but little else than the code of ethics and medical propriety. What the force and effect of his writing will probably be, it is not difficult to foresee. It is only wonderful that one so stained can have associated with him, editorially, the number of estimable gentlemen whose names appear on the cover of that Journal. There is but one explanation of such a misfortune, and this is that the physicians whose names thus appear are ignorant of the facts set forth officially in the pamphlet under review. One may, in the spirit of a broad charity, forgive a medical man who has been so very culpable, but it is impossible to read his platitudes on "the ethics" and propriety, without a smile of derision and amusement.

Those who desire to read the facts set forth in this pamphlet can do so by obtaining a copy of it from the Georgia Book and Job Printing-Office, Atlanta, Ga.

PROCEEDINGS OF SOCIETIES.

"Etsi non prosunt singula, juncta juvant."

THE AMERICAN MEDICAL ASSOCIATION.

First Day.

The delegates to this Association met at Horticultural Hall May 8th, at 11 A. M. Over 300 delegates and permanent members registered their names.

Dr. D. W. Yandell, of Louisville, Ky., presided, and Dr. William B. Atkinson, assisted by Dr. Murray Cheston, both o Philadelphia, performed the duties of secretary.

The meeting was called to order in the morning, and Rev. Dr. William Bacon Stevens, M. D., D. C. L., Bishop of the Protestant Episcopal Church, in Eastern Pennsylvania, opened the exercises with prayer.

Prof. Robert E. Rogers, chairman of the Committee of Reception, welcomed the members in a short but eloquent address.

Dr. Edward Hartshorne, on behalf of the Committee of Arrangements, announced the extensive preparations made for the entertainment of the visitors.

The President then delivered the annual address.

Dr. H. F. Askew, of Delaware, proposed the following:

Resolved, That all questions of a personal character, including complaints and protests, and all questions on credentials, be referred at once to the Committee on Ethics, and without discussion.

Dr. Mussey, of Ohio, asked for a division of the question.

Dr. Porter, of Delaware, said that this is probably one of the most important questions that would come before the Association, and hoped to have a full vote on the question.

The question was further argued by Dr. Jacobi, of New York; Dr. Arnold, of Georgia; Dr. Hartshorne; Dr. Davis, of Chicago; Dr. Bowditch of Boston, and Dr. Palmer, of Michigan. The last-named delegate offered a substitute, which was discussed

by Drs. Bronson, of Massachusetts; Hartshorne, of Philadelphia, and Morris, of Maryland, who called the previous question. The resolution of Dr. Askew was then unanimously agreed to.

The Secretary then announced that Dr. Cohen would exhibit to the surgical section a case of enormously cleft palate which had been successfully operated upon. He further announced that Drs. Hatch, of California; Townsend, of New York; Bush, of Delaware; George W. Lawrence, of Arkansas, and Hill, of Virginia, had presented reports on the climatology and epidemics of their respective States, and that Dr. Fisk, of Oregon, asked to be continued on the committee to obtain a similar report of his section.

Dr. Knapp sent a paper on cataracts; Dr. Jos. Jones, of New Orleans, a book on yellow fever, and Dr. Fitch, of Maine, a paper describing three cases of ovariotomy. These were all referred to their appropriate sections.

The President announced that the Committee on Ethics would be composed of Drs. H. F. Askew, of Delaware; N. G. Davis, of Illinois; Calvin Slavey, of Maine; G. R. Bartlett, of Wisconsin; and Samuel D. Gross, of Philadelphia.*

At 2 o'clock the Association adjourned.

The afternoon was devoted by many of the members to hearing the papers on medical subjects read to the various sections, the basement of the Hall being set apart for that purpose. Other members occupied the time in viewing the extensive collection of electrical, anatomical, pathological, surgical, pharmaceutical and other specimens, instruments and appliances on exhibition at the Hall of the College of Physicians.

In one room of this building there is a manikin from Japan which is 250 years old, and is exceedingly interesting as embodying the knowledge of human anatomy possessed by those people at that remote period.

In the evening the biological and microscopical section of the

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* The South is wholly repudiated in the formation of this committee.—Ed.

Academy of Natural Sciences received the members in the foyer of the hall. Microscopes and other scientific instruments were displayed there for the entertainment of the members. The ladies appeared there and promenaded the lower hall, where music was provided.

SECOND DAY.

Met at 11 o'clock A. M.

The Association was adjourned for ten minutes to allow the delegates to consult with each other in selecting one member from each State to make up the Committee on Nominations.

On reässembling, Dr. W. H. Pancoast announced, through the Committee of Arrangements, that the ladies were also invited to be present at his reception in the evening. It was subsequently announced that Dr. Hugh L. Hodge had also made arrangements to provide for the ladies accompanying the delegates to his reception.

Dr. Yandell arrived before the opening of the session in the church, and presided over the Body for the remainder of the session.

The Secretary announced that Dr. Benjamin Lee requested the members to visit his medical and orthopœdic gymnasium.

Dr. Atkinson then read the list of delegates elected to nominate candidates. This committee then adjourned to meet in Horticultural Hall.

Professor R. E. Rogers, of Philadelphia, said he desired to offer a resolution, which became necessary in consequence of the fact that the Faculty of the University of Virginia had not sent delegates to this Association. Their system of education being peculiar, but of very high standard, they have some hesitation as to the propriety of sending delegates. His resolution was that Dr. J. Edgar Chancellor, of the University of Virginia, be invited to take a seat in the Association. This was agreed to.

Dr. Bronson offered the following as an amendment to the by-laws :

Resolved, That the Committee on Ethics, to consist of seven members, be elected by the Nominating Committee.

The President said that this would have to lie over for one year. The author of the proposed amendment then desired to have it offered as a resolution.

The Chairman decided that the committee, having already been appointed by him in accordance with the existing law on this subject, the resolution could not take effect for another year.

Dr. Bronson—The resolution need not lie over because of anything contained in the Constitution, but it will lie over in its effect—that is to say, the committee appointed under it will perform the functions of their office next year and not to-day.

The President then put the motion of Dr. Bronson, and declared it lost.

The justness of this decision was questioned, and the President then put the appeal to the House. Before the result was announced, Dr. Bronson said: "There has been a doubt expressed, and I should like to state to the Association my reason for offering that resolution."

President Yandell—The decision of the Chair was appealed from, the vote was put and the Chair decided that the Chair was sustained.

Dr. Bronson, however, insisted upon arguing his proposition. The Chairman permitted him to speak, though in violation of the rule.

The President said he would put the question to the House again, so as to show perfect fairness. He did so, and again decided the resolution lost.

A division was called for, and 167 voted in favor, to 187 against the resolution, which was again declared lost.

The Secretary asked that Dr. Edward Seguin, of New York, be permitted to exhibit his method of examining patients with a thermometer.

Dr. Davis opposed this violation of the rules, as establishing a troublesome precedent.

The President remarked that he was accused the day before of being discourteous, and he was now disposed to exercise all the courtesy he could.

Dr. Seguin was told to present his method to the proper section.

The regular business of the Association was then resumed.

Dr. Caspar Wistar, of Philadelphia, Treasurer of the Association, reported that the Association last year exercised a praiseworthy discrimination in the selection of the material furnished for publication, and consequently the volume of Transactions was smaller, more compact, and more desirable to the Profession than heretofore. The edition was published at a price which leaves a balance on hand for the use of the Association when it may hereafter become forgetful of its prudence, and refer a great mass of manuscript for publication. The Treasurer counseled care in the adoption of prize essays, for out of this has arisen a considerable expense. The treasury is depleted annually to the extent of $200, which it can ill afford. The account current shows a balance in hand of $1,005, being about $300 more than was in hand last year. The Treasurer asks the Association to bear in mind that there are no discretionary powers vested in the Committee on Publication. They must publish everything which is referred to them by the sections. Referred to the Publication Committee.

The Chairman took this occasion to suggest, for the consideration of the House, in addition to the view just presented by the Treasurer, that if there is a remedy for the evil complained of, it should be adopted. "The result of the present action is that we pay for a thing, the real value of which we have known for a long while."

Dr. J. S. Weatherly, of Alabama, chairman of the Committee on Medical Education, presented a report which he said was signed by Dr. J. M. Toner and himself. He said that Dr. Cooper Lane, of California, was on the committee, and that he had forwarded an outline of the report, to which Dr. Lane had assented. He did not hear from Dr. Samuel Willey, of Minne-

sota. Dr. W. O. Baldwin's name was not subscribed to the report for reasons which would appear when it was read. The report of the committee alluded to the idea which led to the formation of the Association as being the improvement of the Medical Profession in this country. That it has not done so has not been the fault of the various committees of the Association, since they have made many valuable suggestions. The great number of cheap so-called medical colleges were referred to as still exerting an evil influence on the Profession. The rivalry among this class has become so great that the sale of diplomas without requiring the students to attend the lectures is relied upon for paying the expenses of the institutions. It is due to the dignity and honor of our country that this monstrous traffic should cease. The committee, while admitting the great superiority of the European schools of medicine, also recognize the fact that it is impossible to have the same system adopted in this country. That system does not suit the genius of this country. "We are going too fast now to have the brakes of the Old World applied. The committee believe that the great number of cheap colleges has been the source of much evil, because the standard of graduation in them is extremely low; because many young men who are deficient in education are induced by these low prices to enter into the study of medicine; and, secondly and lastly, because second and third-rate men are engaged in teaching—for it is evident that no one who is competent would exercise his talent for the ridiculously small fee obtained in most of these colleges."

The committee further recommend an appeal, to be addressed by the Association, to the different authorities, asking that no more charters be granted by State authorities to colleges which do not adopt the plan to be hereafter recommended by this Association, and that all colleges now in existence which do not fulfil the requirements of this standard forfeit their charters. The committee also recommend the scheme of Dr. Baldwin as feasible and practicable. An institution founded upon his plan would soon regulate all other medical institutions in this coun-

try. The committee further suggest the establishment of a National Academy of Medicine as recommended by Dr. Moses, of Missouri; it urges that the Association take into serious consideration the expediency of publishing a monthly journal, under the auspices of this Body, instead of the annual volume of Transactions, as heretofore published. The editor is to be elected annually by the Association.* "It is confidently believed that not only the Profession, but also the people would be favorably influenced by this means, as the journal would be read by many who never see the Transactions." The committee recommend that the Association take decided action to make itself felt as the head of the Profession in the United States, by demanding a proper standard of membership, and by publishing to the world that colleges which do not observe certain rules shall not be entitled to representation. The committee urge that a congress composed of delegates from the medical colleges assemble to fix upon some uniform and improved plan of medical instruction, which shall be recognized as the only system of medical instruction in this country. Referred to the Publication Committee.

Dr. F. A. Askew, the librarian, reported that the increase in the library of the Association had been considerable. He suggested that the volumes of the Transactions now on hand be placed in his hands to be exchanged for books upon other subjects. No money had been received by him. Referred to the Publication Committee.

Dr. Francis G. Smith, of Philadelphia—In the absence of the chairman of the committee on prize essays, who is detained at home by a sad bereavement in his family (the death of his son Louis) and who has commissioned me, as the second member of

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* Such a scheme would bankrupt the Association in six months. Editing a journal is a most difficult, painful, expensive and laborious work. No one can learn the elements even of such a business in one year. Half informed, the first editor would surrender his chair to his successor, totally uninformed. It would be far easier to make a moon of green cheese than to find any physician who could in one year successfully edit such a work.—Ed.

his committee, to act in his place, I will present the report to the Association. Four essays were submitted to the committee; of these, one was withdrawn by its author, and the remaining three were carefully examined by the committee. Two of them did not fulfil the conditions which are to determine the disposition of the prize. The third one did—that is, it presented the condition of original research. The title of that essay is, "What Physiological Value has Phosphorus as an Organismal Element," and it bears a Latin motto—"Ne tentis, aut perfice." The name of the author is Samuel R. Percy, M. D., of New York city.

Dr. Parvin, of Indiana, chairman of the Committee on Medcal Literature, reported that he had addressed a letter to each of his four associates. The speaker asserted that we have an American Medical literature of which every one should be proud. If an author wishes to catch the ear of an American physician, he must have something useful to say, and must say it quickly. The committee favored the idea of offering a triennial prize of $600 for the best essay, instead of the present plan of giving $200 to be divided between two each year. They suggest that the chairman of each section deliver an address to his section, as likely (!!) to relieve some of the irksomeness of listening to dry essays. A large portion of this report was devoted to advocating the publication of a national monthly journal, under the auspices of the American Medical Association. Referred to the Publication Committee.

Dr. J. D. Jackson, of Kentucky, chairman of the Committee on American Medical Necrology, submitted his report, which was referred to the Committee on Publication without being read.

The Secretary announced that Dr. J. G. Richardson, of Philadelphia, would read, before one of the sections, a paper on Structure of the White Blood Corpuscles.

Also, that Dr. Hartshorne would read one on the Physiology of the Vaso-Motor Nerves.

Also, that Dr. Pancoast would present to one of the sections,

through Dr. S. Bonaparte Merkel, the case of George Thomas. This is a colored man, a native of England, now a resident of Frederick City, Md., thirty-six years old, who makes a living by exhibiting his ability to roll his abdomen with an undulating motion, like a huge ball, around the umbilicus, and also to move his heart from side to side.

Also, that Dr. J. S. Packard, of Philadelphia, would exhibit to the surgical section a suspension apparatus for fracture of the leg.

Also, that Dr. Hunt had sent in his report on the Climatology of New Jersey. Referred.

Also, that Dr. George M. Beard would read a paper on the recent researches in electro-therapeutics, with a demonstration of some of the methods of application.

Also, that Dr. John P. Garrish would read a paper on "The use of Instruments in Obstetrics."

Also, that Dr. W. H. Mussey would read a volunteer paper on "A Case of Vesical Calculus."

Also, that Dr. Harrison Allen would read a paper on "The Soft Palate in Health and Disease."

Also, that Dr. William F. Peck, of Iowa, would read his report of an operation on the hip-joint, with details of the case.

Dr. William R. Findley, of Pennsylvania, presented a resolution which declared that as the Association, at its meeting in 1869, unanimously adopted a resolution classing all who practiced medicine on the "contract system" with "irregular practitioners," and as this action has excited considerable controversy in many of the county societies, the members of which have misunderstood the meaning of that resolution, it is therefore important that the Committee on Ethics decide whether such physicians are really "irregular." Referred to the Committee on Ethics.

Dr. Sutton, of Indiana, presented a special report upon comparative pathology. He advocated the formation of a great American library, open to all.

Dr. Woodward, of Washington, D. C.—I ask the indulgence

of this Association to make a very brief statement in regard to the very matter the gentleman has just alluded to. I wish to state that the national medical library which he considers so desirable is already in existence; that the library of the Surgeon-General's Hospital, in Washington, has been furnished with funds during the last four or five years by Congress, and has been accumulating books, until it now contains fifteen or eighteen thousand volumes, and that there is every probability that a large appropriation will be granted during the present session for its continuance.

Dr. Gordon inquired whether the reference of a paper to the Committee on Publication necessarily implied its publication.

The Secretary remarked, that the Committee must publish everything that is referred to it.

Dr. Bronson—That being the fact, I would suggest that the prayer just read by Dr. Sutton be referred to the Publication Committee, with instructions to strike out that which refers to the formation of an American library.

Dr. Pollock, of Pennsylvania, said that some notice should be taken of a communication just read, and therefore moved that a committee be appointed by the President to take into consideration the propriety of adopting the suggestions of the Committee on Medical Education. Agreed to.

Dr. Keller, of Kentucky, moved that when papers are referred to the Publication Committee, with instructions to that effect, they are to be published, but when without definite instructions, the committee will exercise its discretion.

The Chairman desired him to put the resolution in writing. While he was doing so, the Secretary read the following from Dr. Stetler, of Pennsylvania, which took precedence:

Resolved, By the American Medical Association, that no report or paper which is referred by it to the various sections shall be referred by the latter to the Committee of Publication without first having been examined and approved by two-thirds of the members present at said section.

Dr. Gordon thought the Committee on Publication should be

composed of men who are competent to decide such questions.

Dr. Porter, of Delaware, endorsed the resolution under consideration, but thought that the paper should be endorsed by two-thirds of all the members of the section, as that would probably secure better attendance. He was opposed to leaving the discretionary power with so small a number as the Publication Committee.

Dr. F. G. Smith thought that this resolution conflicted with the Constitution, and should lie over for one year.

Dr. Williams, of Baltimore, contended that there was now no question which could come up requiring a two-thirds vote, and he did not see that it was necessary in this case. He moved to lay the resolution on the table. Lost—Yeas, 104; nays, 165.

Dr. Palmer argued that the matter had better be left as it is A variety of schemes had been offered during the past few years, but all were impracticable.

The question was further argued by Drs. F. G. Smith, Bronson, and Stetler. The whole matter was then indefinitely postponed.

The Association adjourned at 1 o'clock.

In the evening they were entertained with a lecture by Dr. H. D. Noyes, on "The Relation of Disease of the Inner Structure of the Eye to other Affections of the Body," illustrated by ophthalmoscopic pictures with the magic lantern, in the chemical lecture-room of the medical department of the University of Pennsylvania, Ninth street, above Chestnut.

At 8 o'clock Professor Robert E. Rogers delivered a brief lecture, with demonstrations of electrical phenomena, in the same hall.

The delegates, with the ladies who accompanied them, then proceeded to the residences of Dr. William H. Pancoast and Dr. Hugh L. Hodge, where they were hospitably entertained.

Third Day.

The Secretary read the following, which was adopted in the College of Physicians, in Philadelphia, May 1, 1872:

WHEREAS, Cases of accidental poisoning and of the internal administration of medicines intended only for external use are so frequent; and

WHEREAS, Every possible safeguard should be employed to prevent such accidents; therefore

Resolved, That it is recommended to all druggists to place all external remedies in bottles not only colored, so as to appeal to the eye, but also rough upon one side, so that by the sense of touch no mistakes shall be possible even in the dark; and that all bottles containing poisons should not only be labeled "poison," but also with another label indicating the most efficient and convenient antidote.

Dr. Sayre, of New York, moved to adopt these resolutions. They were fully adopted.

Dr. Alexander W. Stein, of New York city, presented the following:

WHEREAS, It has long been recognized that diseases of a dangerous and fatal nature are transmissible from animals to man, and that certain zymotic affections, which are common to both man and animals, do very frequently manifest themselves, first in the latter and subsequently in man, thus warning us that to be indifferent to the condition of the inferior animals is to introduce and create centres of disease among ourselves; therefore

Resolved, That a committee be appointed to ascertain what measures can be instituted to prevent the extension of such diseases to man, and what sanitary measures can be effected to arrest the progress of such diseases in animals, the committee to report next year. This was adopted.

Dr. Frederick Horner, of Virginia, proposed the following:

WHEREAS, The abuse of ardent spirits in our country has proved injurious to the health of the community.

Resolved, That the members of this Association recommend to discourage the use of alcoholic stimuli in the community. Agreed to. (!!!)

Dr. Francis G. Smith, chairman of the Committee on Nomenclature of Diseases, reported that in accordance with instructions given to them by the Association in 1870, they had prepared a nomenclature to be adopted and observed by the practitioners of the United States. The system presented by the committee is based upon that of the Royal College of Phy-

sicians of London, with such additions and modifications as in the judgment of the committee were needed. In selecting Latin equivalents the committee had frequently departed from the English nomenclature, but so far as possible the English rather than the Latin terms have been employed.

The report had appended to it the following:

Resolved, That the report of the Committee on Nomenclature of Diseases be referred to a special committee of five members, to be appointed by the President, who shall examine it and report upon its final disposition at the present meeting of the Association.

Resolved, That on the favorable report of said committee it shall be referred back to the Committee on Nomenclature for the preparation of an index.

Dr. Woodward, of Washington, offered a minority report which differed mainly from the report of the majority of the committee in the resolutions appended.

The minority report that, while they have the highest respect for the ability and learning of those members of the committee whose residence in Philadelphia has enabled them to attend to its meetings and aid in the production of the report just read, they nevertheless feel it a duty to express their earnest convictions that the adoption of a nomenclature and a classification by this Association is a matter of too great importance to be acted upon hastily, and before any of the members of the Association, except a part of the committee, have had any opportunity to examine for themselves the nomenclature and classification which it is now proposed we shall adopt. The minority of the committee had no opportunity to examine the proof-sheets of this work until the commencement of the present meeting.

The resolution of the minority report was as follows:

Resolved, That the nomenclature and classification just submitted by the committee be published in the Transactions; that one thousand extra copies be printed in cheap pamphlet form and distributed to the Profession, and that the question of the adoption of the nomenclature and classification by this Body be postponed until the next annual meeting.

These reports were discussed by Drs. Woodward, Hamilton,

White, Howard, Gallagher, Newman, Palmer, Atlee, and Squibb.

Dr. Woodward's resolution was then adopted.

Dr. Keller, of Kentucky, then presented the following:

Resolved, That so much of the report of the Committee on Education as refers to the establishment of a Medical Congress, consisting of an equal number of representatives from each State, is of immediate importance; and, in order to further the views thus expressed, that a committee be appointed at once to take the preliminary steps necessary to organization, with instructions to report before the adjournment of this Convention.

Before action upon this, Dr. William O. Baldwin, of Alabama, asked leave to make a partial report from the Committee on Nominations. This was granted, and he announced that the committee had agreed upon the following officers to serve during the ensuing year:

President—Dr. Thomas M. Logan, of California.

Vice-Presidents—Drs. B. H. Catlin, of Connecticut; McPheeters, of Missouri; Pollock, of Pittsburg; and Briggs, of Tennessee.

Treasurer—Dr. Caspar Wistar, of Philadelphia.

Librarian—Dr. William Lee, of Washington, D. C.

Permanent Secretary—Dr. William Atkinson, of Philadelphia.

Assistant Secretary—Dr. Montrose A. Pallen, of St. Louis.

Committee on Library—Dr. J. M. Toner, of Washington, D. C.

The place of next meeting—St. Louis, Mo.

The report of this committee was adopted.

Dr. Keller's resolution was then voted upon, and not agreed to.

Dr. Palmer, in behalf of the delegation from Missouri, thanked the Association for selecting St. Louis for the next place of meeting.

Dr. Palmer then presented a proposition for the establishment of a National Medical Academy, for the purpose of elevating

the standard of medical attainments and the moral worth of its members.

The Association refused to adopt this scheme.

Dr. J. C. Tucker, of California, offered a resolution appealing to Congress to establish a National Sanitary Bureau, in charge of competent medical men, to be appointed by the United States Treasurer, from physicians nominated by this Association.

The bureau was to have charge of all government hospitals, and was to secure the proper supply of bovine virus, besides performing many other National duties.

The plan of Dr. Tucker was very elaborate, and contained an act bearing upon this subject to be presented to Congress.

Dr. Gallagher moved that the report of Dr. Tucker be laid upon the table. Agreed to.

Dr. Tyler, of Washington, D. C., insisted upon the members exercising great care in submitting questions to Congress, that all such subjects were likely to be governed by a ring for their personal advantage.

That portion of the report of the committee which referred to taking action in connection with the authorities in Washington was stricken out, and the report was then agreed to.

Dr. Talley, of South Carolina, called up the question which he said was pending at the adjournment the day before.

This was Dr. Keller's resolution, which was, in effect, that unless a paper which was referred to the Committee on Publication had upon it instructions to the committee to publish it, the publication of that paper would be optional with the committee.

The President decided that a call for a division on the motion to indefinitely postpone was made the previous evening, but was not considered before the motion to adjourn, and that, therefore, the discussion of this resolution was in order.

The resolution was then discussed at great length, and several amendments were offered, and finally, on motion of Dr. Davis, of Chicago, the whole subject was indefinitely postponed.

Dr. Askew, from the Committee on Ethics, presented a report, which was read by Dr. Davis.

In relation to the preamble and resolutions offered by Dr. Davis, touching the Massachusetts Medical Soeiety, the committee recommended them for unanimous adoption by the Association. They are as follows:

WHEREAS, It has been represented that the Massachusetts Medical Society considers that its delegates to the annual meeting of the American Medical Association in Washington, May, 1870, were unjustly excluded by the Committee of Arrangements; and

WHEREAS, The action of the Committee on Ethics, at the same meeting, in refusing the right of said Committee of Arrangements to exclude the Massachusetts delegation, is not yet fully understood by that Society; therefore

Resolved, That the Association acknowledge the great and effective efforts of the Massachusetts Medical Society to elevate the Profession, and to suppress quackery of all sorts, and especially assure that Society of encouragement and support in its present exertions to rid itself of all pretenders.

This was agreed to by the Association.

The committee report in regard to the official communication of the Corresponding Secretary of the Medical Society of the District of Columbia, certifying that Drs. Bowen, Bond, Williams, Crouse, Phillips, and others, have forfeited their membership in that Society by reason of not having paid their dues for three years, and after repeated notice of the fact and its consequences—the committee recommend that their names be stricken from the roll of membership; and also the same action in regard to Dr. D. W. Bliss,* who is under sentence of expulsion from that Society. Unanimously adopted.

In regard to alumni associations of medical colleges, the committee reported that it did consider that such medical societies were intended, by the Constitution, to be eligible to membership, and hence they recommend that no delegates be received from any of the alumni associations of any of the medical colleges from any part of the country. Unanimously agreed to.

In regard to the pathological Society of Berks county, Pa.,

* This is the cundurango gentleman.—ED.

the registration of whose delegates had been postponed on account of the protest alleging the want of good standing on the part of that Society, the committee postponed action from the want of proper evidence.

In regard to the Academy of Medicine of Washington, D. C.; the Freedman's Hospital, of the District of Columbia, and the Howard University, of Washington D. C., the registration of whose delegates had been postponed by the Committee of Arrangements on account of the want of good standing on the part of those institutions, as indicated by the action of this Association in 1870 and 1871, the committee report the facts as follows: First, that this Association, at its meeting in San Francisco in 1871, by the emphatic vote of 83 to 26, refused to so amend the Constitution as to admit delegates from colleges in which women are taught and graduated in medicine, and from hospitals in which women, graduates in medicine, attend. Second, that this Association, in 1870, declared, by an almost equally emphatic vote, that a medical society, constituted in part by members who were not licensed to practice in accordance with the civil law governing such cases in certain States, is not entitled to representation in this Association. Third, sections 3, 4, and 5, of the act of Congress, passed July, 1838, incorporating the medical Society of the District of Columbia, and which has been the law regulating the practice of medicine in that District up to the present time, requires all persons coming into the District to practice medicine, to apply for, and within six months obtain, a license to practice from the Board of Examiners, and to effect that purpose, makes it a misdemeanor, accompanied by a fine of $50, to practice without such license. Fourth, that it has been proven by the testimony of several witnesses that the Medical Society of the Academy of Medicine, of Washington, now contains in full fellowship at least four or five members who have never applied for and obtained licenses to practice, and yet are actually practising medicine, and three of whom are on the list of delegates sent by that Society to this Association; also, that

one of them is a member of the medical staff of the Freedmen's Hospital, and also that several of the Faculty of the Howard University are members of the same Academy of Medicine, and one of the teachers is a woman.

In view of these facts, the committee cannot regard either of the three institutions named as in good standing, whether tested by civil law, by the former decisions of this Association, or by its code of ethics, and hence the committee recommend that the delegates from those several institutions be not admitted into this Body.

Dr. Rayburn, of Washington, D. C., obtained the floor, but granted Dr. Davis permission to read the next final section of the report, which was in reference to the resolution of Dr. Finley, asking of this committee a clear interpretation of what is now a part of the by-laws of the Association.

The committee offered the following:

Resolved, That members of the Profession hired by the month or year for definite wages, by families, railroads, manufacturing incorporations, or any money-making institution whatever, for ordinary surgical or medical practice, always excepting elemosynary and charitable institutions and hospitals, are to be classed as irregular practitioners, and, therefore disqualified for membership in this Association, or in State or county societies.

Dr. Weatherly moved to refer this question back to the State societies. Agreed to.

Dr. Rayburn spoke for fifteen minutes in regard to his claims for membership. He asserted that the Medical Society of the District of Columbia had given license to homœopathic practitioners. The Howard University, he said, received all who applied for medical education, without distinction of color or of sex. If the Association see fit that institutions of that class shall not be represented, of course they have the power so to act, but, at the same time, it should consider well what it was doing before taking such a step. He thought that every human being should be allowed the right to the very highest development that God has made him capable of.

Dr. Busey, of the District of Columbia, defended the report of the committee in a very earnest speech.

At the conclusion of this address a great deal of confusion was occasioned by cries of "question," and by hisses from those who were anxious to vote without further discussion.

Dr. Palmer explained his position as professor in the Howard University. He said he had not practised medicine in that city, and, therefore, had not procured a license, as the law requires. He did not understand why he should be excluded from this Association on account of his connection with that institution.

A very rambling and animated discussion followed, and the Presdent had great difficulty in preserving order. Motions were made in rapid succession, but they were not noticed by the chairman.

Dr. Sayre, of New York, moved that the resolution of the committee be adopted.

Dr. Todd, seconded the motion, and, under the call of the previous question, it was finally carried by an overwhelming majority.

During the evening the delegates were entertained by Thomas A. Scott, at his residence on Rittenhouse square.

At 7 o'clock in the evening Dr. J. Solis Cohen lectured to the members in the Jefferson Medical College, illustrating sound by elaborate apparatus constructed for that purpose.

Fourth Day.

The Association was called to order at 10 o'clock.

Dr. Peter Pineo, of Massachusetts, presented a resolution placing the United States marine hospital service in the same relative position in this Association as the medical department of the army and navy, and making the necessary alterations in the Constitution. Laid over for one year.

The President appointed the following committee in reference to the publication of a national medical journal: Drs. Pollock,

Westmoreland, Talley, Walker, Jackson, Weatherly and McGuire.

A paper written by Dr. Jones was sent back to the Association from one of the sections, as being too voluminous for publication. There was a long discussion as to what disposition should be made of this document.

Dr. Davis, of Chicago—This subject is one of vital importance to the scientific part of this Association. I deem it at the very foundation of the scientific value of the Association, and hence I am anxious to get the sections to understand what seems to me the only feasible mode of disposing of papers. The true course is to have such papers referred to a sub-committee of the section. The author of a paper must, in the first place, inform the section to which it belongs thirty days beforehand that he is going to offer it; then, when the section comes together, it must take the responsibility of putting the paper in the hands of a committee that will examine it and make the necessary recommendation. If a writer presents a paper which is large enough for a book, and if it is meritorious, let the section return it to him with the recommendation that he get it published, with the endorsement of the section. If the paper is a very short one, and one that would be creditable to a national body, then let the section refer it back to its author, with the recommendation that he publish it in some medical journal, with the appendix that his paper has been recommended by his section. We can thus limit our volume to subjects which are either new, or which possess special merits, and then it will be readable and saleable.*

On motion of Dr. Wistar, the paper in question was referred to its author, with a request that he present it next year in time for the section to examine it, or else that he reduce it in size.

Dr. H. F. Askew offered the following:

Whereas the removal, in the wisdom of Divine Providence,

* This is certainly a most excellent suggestion.—Ed.

by death, of W. W. Gerhard, E. D., marks an event of more than ordinary importance; therefore

Resolved, That the combination of high talent with education and extensive observation, and close analysis exhibited by him before entering upon the study and practice of medicine, which he pursued with extraordinary diligence under the most favorable advantges in the Hotel Dieu, in the clinic of that great master, Baron Louis; that the improvements made by him in diagnosis, especially of the diseases of the heart and lungs, and of typhoid fever, and, added to this, his pathological knowledge which was so remarkably accurate and so admirably and successfully exhibited in the Blockley Hospital (the first field of his labors after his return home) and afterward in the Pennsylvania Hospital, that they could not fail to imbue his classes with the enthusiasm which manifested itself in his teachings, that the Profession of that day, without hesitation, accorded to him, although a young man, a position, primus inter pares, and hence his reputation rapidly spread through the country, and brought to him thousands who desired his wise judgment on disease.

Resolved, That this Association desires thus to record its high appreciation of the services and character of this lamented member of the Profession, and that a copy of these resolutions be transmitted to the family of the deceased.

Dr. Porter, of Delaware, made some remarks upon the resolutions, which were then adopted by a standing vote.

Professor Robert E. Rogers presented the report of Dr. D. J. Deal, of Philadelphia, on the cultivation of the cinchona tree, showing a gratifying progress in this direction.

Dr. Davis, from the committee appointed to consider the subject of the preliminary education of those proposing to study medicine, reported that the State societies had given them gratifying evidence of progress, and at his request the committee was continued.

The Secretary announced that the following special committees made reports, which would be published in the Transactions:

On the structure of white blood corpuscles, Dr. J. G. Richardson, Pennsylvania, chairman.

On national health council, Dr. Thomas M. Logan, California, chairman.

On nomenclature of diseases, Dr. Francis Gurney Smith, Pennsylvania, chairman.

The following special committees made no reports:

On the anatomy and diseases of the retina, Dr. R. F. Michel, Alabama, chairman.

On vaccination, Dr. T. N. Wise, Kentucky, chairman.

On skin transplantation, Dr. J. Ford Thompson, D. C., chairman.

On the nature and process of the restoration of bone, Dr. A. L. McAuthur, Illinois, chairman.

On what, if any, legislative means are expedient and advisable, to prevent the spread of contagious diseases, Dr. M. H. Henry, New York, chairman.

The following special committees were continued:

On the comparative pathology and the effects which diseases of inferior animals have upon the human system, Dr. Geo. Sutton, Indiana, chairman.

On some diseases peculiar to Colorado, Dr. John Elsner, Colorado, chairman.

On correspondence with State medical societies, Dr. N. S. Davis, Illinois, chairman.

Professor Gross then addressed the Chair as follows: It is well known that our Transactions contain many papers which might be dispensed with. The by-laws provide that there shall be an annual report upon medical education, medical literature, and the climatology and epidemics of the several States. We have been an Association for a quarter of a century, and during this period there has been an everlasting repetition from year to year of these reports on education, literature, etc. It has been carried on ad nauseam in the highest possible degree. It was supposed, at the foundation of this Association, that the action of this Body would exert a favorable influence on the progress of medical institutions in this country. That it has signally failed in accomplishing this object is known to every member on the floor of this House. This Body is entirely powerless in regard to this matter. Appeals have been made from

time to time to the medical schools of the United States, until a Congress was formed and met in Cincinnati in 1867, for the purpose of taking this matter into consideration and report at the approaching Medical Association at Cincinnati. I had the honor of being a delegate from the Jefferson Medical College to that body. That we had at heart the interests of medical teaching, I need hardly say on this floor. We continued three days deliberating on the subject, and finally we agreed to present to this Association a report, through our chairman, Dr. Stillé. That report fell stillborn from the hands of the gentleman who had it in charge. In 1870 the same Convention met, and their action in this matter was followed by the same results. I hope we shall hear no more on the subject of medical education, and I hope that the same remedy may be applied on the subject of medical literature.

Prof. Gross continued to argue in favor of abolishing the present system, and finally proposed as an amendment to the by-laws, under the head of standing committees, that instead of a report on medical education, on medical literature, and climatology and epidemic diseases, there shall annually be delivered before the Association, at its general meeting, an address on medicine, an address on surgery, and an address on midwifery, or the diseases of children—the lecturers to be appointed by the Nominating Committee.

Dr. Davis—I cannot agree that all this work of the Association on medical education has fallen stillborn on the Profession; instead of that, I think that it has resulted in storing up professional sentiment all over the land. The seed is just beginning to germinate, and we have institutions now which are formed upon that foundation.

Dr. Palmer, of Michigan, moved to lay the amendment on the table. Agreed to.

Dr. E. Lloyd Howard, of Maryland, presented a resolution appointing a committee of three, to report at the next meeting of the Association, a plan for a better arrangement of the sections, and for the more rigid examination of the papers offered

for publication. Agreed to, and the President subsequently appointed on the committee Drs. Howard, Bronson, and R. E. Rogers.

On motion of Dr. Hartshorne, the thanks of the Association were tendered to the congregation of the First Reformed Presbyterian Church for their timely and generous permission to occupy their building.

Dr. Askew, of Delaware, was requested to prepare suitable resolutions relative to the death of Prof. Samuel Jackson, the resolutions to be printed in the minutes.

Dr. Alexander W. Stein, of New York, offered the following:

Resolved, That the committee appointed by this Association in Washington, D. C., in 1870, to report on what means are expedient to prevent the renewal of prescriptions by druggists without the consent of the physician ordering said prescriptions, be continued one year. Agreed to.

Dr. Hartshorne presented a resolution, according to the memory of Profs. Dickson and Jackson the same testimonials as had previously been adopted in the case of Dr Gerhard. Agreed to.

On motion of Dr. Davis, the name of Dr. Zina Pitcher, of New York, was added.

On motion of Dr. Hartshorne, Dr. DaCosta was requested to prepare suitable resolutions in recognition of the services of Dr. Dickson.

Dr. Skillman, of Kentucky, presented a resolution acknowledging the valuable services of Dr. William Atkinson as permanent secretary of the Association, and appropriating to him an annual salary of $1,000.

This was discussed at great length, and on motion of Dr. Davis, it was at last agreed that, in view of the present prosperous condition of the treasury, he should receive from the Association $500 as a token of their appreciation of his services.

The thanks of the Association were returned to Thomas A. Scott and Drs. Pancoast and Hodge for their entertainments.

On motion of Dr. Parsons, the name of Dr. P. D. Marmion,

of New York, was ordered to be expunged from the register, and his case was referred to the Committee on Medical Ethics.

On motion of Dr. Baldwin, of Alabama, a special committee was appointed, with Dr. Sullivan as chairman, to consider the relations between physicians and druggists, and report at the next meeting.

Dr. Reese, of Brooklyn, offered the following:

Resolved, That while we admit the right of woman to acquire medical education and to practice medicine and surgery in all the departments, we deem the public association of the sexes in our medical schools and at the clinics of our hospitals as impracticable, unnecessary, and derogatory to the instincts of true modesty in either sex.

The resolution was immediately laid upon the table, and unimportant business was transacted, when Dr. Busey suggested that laying this resolution on the table was an error upon the part of the Association.

On motion of Dr. Rogers, the resolution was taken from the table, and he then said that in voting to lay the resolution upon the table, the Association had virtually accepted it.

Dr. Hartshorne then moved to indefinitely postpone the consideration of the subject. Agreed to.

Dr. Yandell announced that all the business of the session had been disposed of.

After thanking the members, in a short address, for their uniform kindness and courtesy toward him, he declared the meeting adjourned, to meet in St. Louis next May.

Green River Medical Association, Ky.

A convention of the physicians of the counties of Davis, Hancock, McLean, and Ohio, Ky., called by request through the Owensboro' Medical Society, met in the city of Owensboro' on the 31st of January, 1872, and organized by electing E. A. Lackland, M. D., to the Chair and J. Q. A. Stewart, M. D., Secretary.

On motion, the Convention resolved itself into an Association, to be called the Green River Medical Association.

On motion, a committee of five was appointed by the Chairman to draft a Constitution and By-Laws for the government of the Association, and that said committee report at the next meeting. Drs. Kimberley, Woolfolk, Luckett, Bryant, and Stewart were appointed said committee.

On motion, a Committee on Credentials was appointed, consisting of Drs. B. H. Hobbs and Ellls, to report at next meeting of the Association.

On motion, the Association adjourned to meet in the same place on the 20th of February, 1872, at 11 o'clock A. M.

E. A. Lackland, M. D., President;
J. Q. A. Stewart, M. D., Secretary.

Pursuant to adjournment, the Green River Medical Association met in Owensboro' February 20, 1872.

On motion, W. H. Hillsmann, M. D., of Livermore, was called to the Chair and J. Q. A. Stewart appointed Secretary.

The committee which was appointed to draft a Constitution and By-Laws reported; and, after undergoing some alterations, the By-Laws were adopted.

The election of officers for the ensuing year resulted as follows: D. W. H. Hillsman, President; Dr. W. A. Hickman, First Vice-Presdent; Dr. E. H. Luckett, Second Vice-President; Dr. J. Q. A. Stewart, Recording Secretary; Dr. A. C. Wood, Corresponding Secretary; Dr. J. F. Kimberley, Treasurer.

On Arrangements.—Drs. J. Q. A. Stewart, R. B. Gilbert, and Russell.

On Medical Ethics.—Drs. E. H. Luckett and A. C. Wood.

On Public Hygiene.—Drs. J. F. Kimberly and Russell.

On Epidemics.—Drs. G. Tyler and F. Hale.

On Obstetrics.—Drs. W. A. Hickman, E. H. Luckett, and Fields.

On Practical Medicine.—Drs. B. H. Hobbs, F. Conway, and Clements.

On Surgery.—Drs. W. F. Sterman, S. S. Watkins, and Woolfolk.

On Finance.—Drs. C. H. Todd, Hobbs, and Scott.

On Publication.—Drs. J. Q. A. Stewart and A. C. Wood.

On Credentials.—Drs. B. H. Hobbs and Ellis.

On motion of Dr. J. Hale the Corresponding Secretary was directed to furnish the "Richmond and Louisville Medical Journal" with the minutes of the meeting for publication.

On motion, the Association adjourned to meet in the same place on the first Tuesday in May next at 11 o'clock A. M.

W. H. Hillsman, M. D., President;
J. Q. A. Stewart, M. D., Record. Sec'y;
A. C. Wood, M. D., Cor. Sec'y.

Note.—It is hoped that the proceedings of this Society and other medical societies will be sent to this Journal for publication.—Ed.

CHEMICAL AND PHARMACEUTICAL.

"Diruit, ædificat, mutat."—Hor.

To Remove Paint from Stone.—A correspondent of the London "Builder," having to clean a pulpit and sedilia in which the carving and tracery were almost filled up with successive coats of paint, was informed that common washing soda, dissolved in boiling water, and applied hot, would remove it. He says: "I found that 3 lbs. of soda (cost 2½d.) to a gallon of water, laid on with a common paint-brush, answered the purpose admirably, softening the paint in a short time, so that it was easily removed with a stiff scrubbing-brush; afterward, on adding a few ounces of potash to the solution, it softened more readily than with soda only. The stone in both cases was a fine freestone."

Colored Fires.—A member of the German artillery corps gives the following formulæ for making colored fires:

1. White light: 8 parts saltpetre, 2 parts sulphur, 2 parts antimony.

2. Red light: 20 parts nitrate of strontia, 5 parts chlorate of potash, 6½ parts sulphur, 1 part charcoal.

3. Blue light: 9 parts chlorate of potash, 3 parts sulphur, 3 parts carbonate of copper.

4. Yellow light: 24 parts nitrate of soda, 8 parts antimony, 6 parts sulphur, 1 part charcoal.

5. Green light: 26 parts nitrate of baryta, 18 parts chlorate of potash, 10 parts sulphur.

6. Violet light: 4 parts nitrate of strontia, 9 parts chlorate of potash, 5 parts sulphur, 1 part carbonate of copper, 1 part calomel.—*Ex.*

Cheap Mode of Preparing Pure Dextrine.—Five hundred parts of potato-starch are mixed with 1,500 parts of cold distilled water and 8 parts of pure oxalic acid, and this mixture placed in a suitable vessel on a water-bath, and heated until a small sample tested with iodine solution does not produce the reäction of starch. When this is found to be the case the vessel is immediately removed from the water-bath, and the liquid neutralized with pure carbonate of lime. After having been left standing for a couple of days the liquor is filtered, and the filtrate evaporated upon a water-bath until the mass has become quite a paste, which is removed by a spatula, and, having been made into a thin cake, is placed upon paper and further dried in a warm plate; 220 parts of pure dextrine are thus obtained.

Phosphated Candy.—The restoration of the phosphorus to bread which has been removed in the bran, as so successfully accomplished in the Horsford baking powders, is well known both in this country and Europe. We now hear of a novel way of turning our national love of candy to similar benefit, by employing phosphorus instead of sulphuric acid in *sour* drops. Mr. Charles S. Allen, of the School of Mines of Columbia College, has invented a phosphated candy, which he prepares by combining one or more of the acids or salts of phosphorus with sugar, thus ingeniously presenting an acceptable form of assim-

ilable phosphorus to those who need some repair to the nervous and brain forces. It is a pleasant way of taking phosphorus as a medicine, and has been deemed worthy of a patent.—*Ex.*

Digitalis an Anaphrodisiac.—M. Gourvat, in the course of a paper published in the "Gaz. Med. de Paris," on the action of digitalis, says: "When digitalis, or digitaline, is administered for sometime to a man in full possession of sexual powers, these become gradually weakened, the propensities disappear, formation of the liquor seminis diminishes, and may at last cease altogether. The anaphrodisiac properties of the drug are the secret of its good effect in spermatorrhœa. With women, digitalis or digitaline excites strong, regular, uterine contractions, and controls metrorhagia; hence digitalis is employed in producing abortions. (Tardieu.) It is probable that this drug acts as an anaphrodisiac in women, inducing by long-continued use, impotence and sterility, appearing also, in their cases, to interfere with the development of the Graafian vesicles; the propagation of species being thus doubly retarded.—*Ex.*

To Filter Alcohol.—The following method of filtering alcohol or its solutions is said, by the *Druggists' Circular,* to be very satisfactory, and to be used extensively in North Germany, where it constitutes one of the secrets of the trade. Clean, unsized paper (Swedish filtering paper is the best) is to be torn into shreds and stirred into the liquid to be clarified. The whole then is to be strained through a flannel bag, when the resulting liquid will be found to possess the utmost clearness and limpidity. A filter may also be made by spreading thin paper pulp evenly upon stretched flannel or woollen cloth. When dry, the cloth so coated will be found to give better results than the felts, etc., commonly employed as filters.—*Ex.*

Fire Kindlings.—In France a very convenient and economical kindling is made by dipping corn-cobs for about one minute in a bath composed of 60 parts melted resin and 40 parts tar. They are next spread out to dry on metallic plates, heated to

the temperature of boiling water. They are then assorted, according to size, and tied up in bundles. They sell for one to two centimes (half cent) apiece. The "Compagnie des allumettes landaise" employs thirty workmen, and makes about $40,000 worth a year.—*Ex.*

MISCELLANEOUS.

"Non omnes eadem mirantur amentque."

Successful Application of Speir's Artery Constrictor.—Dr. Charles A. Hart, New York, ("New York Medical Journal,") relates eleven cases of amputation, aneurism, etc., in which applications of Dr. S. Fleet Speir's artery constrictor were successful. The practical points which this constrictor presents over the ligature, he says, are: 1st. Its greater certainty of permanently controlling arteries in a healthy condition, as well as in extreme states of disease. 2d. The wound being free from any absorbing or retaining agent like the ligature, which discharges can decompose, there is less liability to septicæmic poisoning. 3d. The wound being entirely free from any foreign body, there will be a greater probability of obtaining primary union, which we can materially assist by hermetic closure of even as large wounds as in amputation of the thigh, by covering the entire stump with collodion. 4th. Far less liability to secondary hæmorrhage when applied to a vessel in its course. Should the invagination of the coats or clots give way, the current of blood will simply flow on in the old channel, and not exsanguinate the patient, as in secondary hæmorrhage after the ligature.—*Exchange.*

Clay Dressings for Small-Pox.—Dr. E. S. Bunker, of Brooklyn, writes to the "Medical Record," that during the recent epidemic he used clay dressings for two pretty decided cases of confluent small-pox. Both patients were young women. One,

a married lady, aged twenty-three (delivered on the second day of a six months' fœtus), made a fair recovery, took cold after getting up, and in a few days died suddenly of empyæma and pericarditis; diagnosis confirmed by autopsy. The other, single, aged twenty-one, had the disease with great violence, recovered rapidly, and is now well. In each case he dusted finely-sifted pipe-clay over the face as soon as the pustules became fairly developed. This formed immediately a clean, dry, wholesome scab; abolished the intolerable itching and burning; served apparently as a good absorbent of infectious material; and scaled off during convalescence, leaving underneath a soft, natural integument. There was no disfigurement in either case.—*Ex.*

Pessary for Offensive Uterine Discharges.—We understand that Dr. John Day, of Geelong, has recently been using with great advantage a new kind of pessary as a means of removing the offensive odor given off in certain uterine diseases, as cancer, etc. These pessaries are made by gently melting cocoa butter, and then adding to it ozonic ether in the proportion of a drachm of the latter to an ounce of the former. The addition of about one-eighth part of white wax will give greater solidity to the mass, and in hot weather seems an improvement. Each pessary should weigh about a drachm and a half. The mass thus prepared retains its active agent, the peroxide of hydrogen, for a month or longer, as may be readily proved by scraping a few fine shavings from a pessary on a drop of blood or pus lying on a piece of white paper, then folding the paper, and holding it between the forefinger and thumb for a minute or two, so as to dissolve the cocoa butter, and lastly adding a drop of tincture of guaicum (oxidized if pus is used), when a blue reäction will at once take place.—*Med. Times and Gaz.*, Nov. 14, 1871.

Toxæmia from Persistent Use of Chloral Hydrate.—Dr. N. R. Smith, of Baltimore, ("Boston Medical and Surgical Journal,") relates two cases of chronic poisoning by chloral hydrate. Among the characteristic symptoms, he mentions erythematous inflammation of the integuments of the fingers, with desquamation and ulceration around the borders of the nails; feebleness

of the heart's action, acceleration of the pulse, and in one case, at least, albuminuria and general anasarca. The toxæmic effects produced by chloral bear a striking resemblance to those caused by the continuous administration of ergot.

Abortive Treatment of Felons—Dr. J. H. S., in the "Boston Journal of Chemistry," has for ten years adopted the plan of applying several coatings of collodion over the finger, or place where the pain is felt, on its first appearance. On drying, the collodion contracts with an even pressure, and if kept on for twenty-four hours the symptoms will usually disappear. Of late, he has been in the habit of soaking the finger in quite a strong solution of carbolic acid, for a few minutes before applying the collodion.—*Oregon Med. and Sur. Reg.*

Incontinence of Urine in Children.—Mr. Holmes Coote recommends for this intractable affection the administration of creosote in one-minim doses, three times daily, combined with assafœtida and rhubarb pill, of each two grains.

MEDICAL NEWS.

'Nulla dies sine linea."

Precocious Development.—Flügel describes in the "Bayr. ärtzl. Intell.-Blatt." the case of a female child who died of diarrhœa at the age of five and a half years, having attained the height of five feet. The incisor teeth all appeared when she was six months old, and at nine months she had all the molars. At a year and a half of age she menstruated, and especially in her later years, the periods were tolerably regular. The external genitals, excepting the absence of hair, were well developed; the breasts were full, and the pelvis roomy. The condition of the internal genitalia was not ascertained. As regards her intellect, she did not appear to be in advance of other children of her age, although she had begun to speak when six months old.

Br. Med. Journ.———The Jefferson Medical College of Philadelphia has, during the period of its existence as an educational institution, graduated six thousand and fifty-four medical students.———*Four Children at a Birth.*—A woman, residing at Northampton, Mass., gave four children at a birth. The mother and children were doing well at last advices. She has had seven children within the last thirteen months.—*Ex.*——— *Deadliness of War-Weapons.*—Of 3,453 Germans wounded before Metz, no fewer than 95.5 per cent. were struck by Chassepôt balls, 2.7 per cent. only were wounded by projectiles from heavy guns, and there were only 0.8 per cent. of wounds from cold steel. No fewer than 25,000 Frenchmen in all were struck by the projectiles of the German artillery. This gives an average of one effective shot in every three fired from the German batteries, a result which appears hardly credible.—*Ex.* ———*Death of a Prominent French Physician.*—Dr. Barthelemy Roch, President of the Medical Association of Alais, France, since the year 1854, died lately, aged ninety-four years. *Ex.*———*An Enormous Aerolite.*—A specimen weighing 36 tons has been presented to the Paris Academy of Sciences by the Danish and Swedish Governments.—*A Valuable Medical Library for Sale.*—The valuable library of the late Professor George C. Blackman, M. D., of Cincinnati, containing upwards of 3,000 volumes of medical works, besides many journals, pamphlets, and papers, is now in the hands of Mr. Robert Clarke, of Cincinnati, for public sale. We agree with the editors of the "American Practitioner," that the library should be owned by some public institution or association, similar to the New York Medical Library and Journal Association.—*Ex.* *Illinois Medical Bill.*—Illinois has just passed a bill forbidding any one practising medicine in that State without a diploma.— *Ex.*———Dr. C. E. Brown Séquard, who has been on a short visit to this country, will soon return to France. He remains abroad until September, when he will return to deliver his course of lectures at the Harvard Medical School. He gave a characteristic lecture on brain diseases before the Medical Li-

brary and Journal Association on the evening of April 12th, to a large and appreciative audience.—*Ex.*———*Reproduction of the Membrana Tympani.*—In the proceedings of the American Otological Society a case is narrated illustrating the almost complete reproduction of this membrane after its destruction by disease.—*Ex.*———Four Italian physicians have been chosen to be senators of the kingdom—viz., Professors Stanilaus, Cannizzaro, and Maggaorina, of Rome, and Porta, of Padua.—*Ex.* ———A Bougie à Boule, used by M. Guyon, and made by Collin, the successor of Charrière, and described in the "Journal de Méd. et de Chirurg. of March, consists of an elastic bougie, which has for its foundation a number of fine wires. The bougie terminates in a screw, to which may be attached different sizes of the olive or pear-shaped tips resembling those now in use. These tips, when not in use, are for convenience screwed into the side of a plate—*Ex.*———*Memory.*—Haring, the physiologist, asserts that about the heaviest tax on the memory is that imposed by the profession of the pianist. Rubenstein recently played by heart a piece in which Professor Schmidt counted no fewer than 62,990 notes.—*Ex.*———*Inoculating Syphilis by Vaccination.*—According to Dr. Med. A. Walter, Physicist of the Circuit of Hoyerswerda, Gy., with its 31,169 inhabitants, not one case of this character has occurred during forty-one years' observation in that district. Such a calamity, he says, may be avoided by constant attention on the part of the physician. Many English, German, and French physicians, some of whom have vaccinated over 40,000 children each, testify that they have never known a case of such communication.—*Ex.*———*Medical College.*—Dr. Eli Geddings has resigned the Chair of Clinical Medicine, but retains his connection in the S. C. Med. College as Emeritus Professor of the Institutes and Practice of Medicine. Dr. F. Peyre Porcher, the well-known author of the "Resources of the Southern Fields and Forests," was appointed to the chair made vacant by the resignation of his distinguished predecessor, Dr. Geddings. The Chair of Obstetrics was divided, Dr. F. M. Robertson, formerly

Dean, being appointed to the professorship of Gynæcology and Clinical Obstetrics, and Dr. J. Ford Prioleau to that of its Principles and Practice.—*Ex.*———*The Importation of Opium.* The money value of opium imported through the custom-house of New York city, in the year 1871, was $1,299,091.

EDITORIAL.

"Nullius addictus jurare in verba magistri."—Hor.

The American Medical Association.—The proceedings of the last meeting involve questions of so much interest as to merit special notice and examination.

It is gratifying to know that the attendance was large; the interest great; the questions brought forward important; the sessions harmonious; the discussions respectful and courteous; the avoidance of polemical, sectional, ethnological, and woman's rights claims marked and almost absolute. This is certainly a great improvement on the sessions of the past five years. With a continuance of such a record, the Association will regain much of an influence and importance which it had almost wholly lost.

The motion of Dr. Askew to refer, without debate, all questions of a personal character, all complaints, charges, protests, disputed credentials, etc., to the Committee on Ethics, is specially deserving of commendation. This is the true course to avoid wrangling, loss of time, loss of dignity and usefulness in a scientific body. The Committee on Ethics must, however, be constructed by the Nominating Committee, and not by the Chair. It should also be increased in numbers to seven or nine. With such a committee and with such legislation, harmony is unavoidable, and wrangling and loss of time impossible.

In the formation of this highly important committee, the Nominating Committee will, of course, so act as to have each por-

tion of the whole country fully represented. This duty, it is evident, cannot safely be entrusted to the Chair.

The efficient Treasurer, Dr. Caspar Wistar, shows the treasury to be in excellent condition. His key-note as to the reckless referring of miscellaneous and valueless papers to the Publishing Committee (which is devoid of discretionary power, and must publish all papers referred to it) was well and advantageously given. It has produced excellent results by arousing attention, and it will secure still better by inducing efficient and necessary legislation.

The report of the Committee on Medical Education deserves notice. Attention is called by it to the ruinous effects of cheap-fee medical colleges. While it was well to mention this great evil and intolerable nuisance, experience has demonstrated that the Association is powerless to prevent or abate it. The penalty suggested for such abuses (non-recognition by the Association, the request to have the charters of such colleges annulled, and no more charters granted unless the avoidance of this evil is ensured, etc., etc.,) is impracticable. State Legislatures can not be controlled by all of the scientific bodies in the country; the influence of one would be absolutely powerless. The remedy suggested is good in theory; in practice, it is absolutely Utopian and valueless. The suggestion of a convention of medical teachers to determine upon a proper course, curriculum, and system of medical studies, was once accepted as good; that day has passed. Such a Body can do nothing. The experiment has been twice tried. The failure was absolute. Had these conventions really accomplished something, instead of nothing, the Association would have wrangled over the reports; but even if an able and masterly report had been prepared and then accepted by the Association, such action would have amounted to nothing, and would now amount to nothing. The Association has not and can not have the power to control medical colleges, and without absolute control, all legislation is futile and visionary. The remedy has been tried, weighed, found wanting and worthless. Do

not waste time and temper and talents by returning to it; "*nulla vestigia retrorsum.*"

The project, as recommended, to establish an Association Medical Journal would, if tried, prove ruinous in results. The simplest labors to be efficiently discharged require experience. This is a difficult and complex work. Years of experience are necessary to demonstrate what ought to be done, and even more time is required in which to gain the knowledge and power with which to do what is thus indicated. To elect an editor yearly, as suggested by the committee, would be cruel to the gentlemen elected. Before they could realize and appreciate their work, their time of office would expire, and they would each endure only the memory of bad plans badly executed, and suffer criticism unjust, severe, and ruinous. It requires time; experience; matured judgment; capacity; fitness; appropriate taste; a carefully-established correspondence; familiarity with good artists and good artisans; self-interest; personal ambition for the success of a personal work; energy; fidelity; independence; and untiring industry to conduct a journal successfully. Each reader will, in examining the qualifications here stated, regard them all as indispensable, but none will appreciate this fact so fully as journal editors, who feel daily the want of such qualifications, and the indispensable necessity for them, in the constant struggle to discharge efficiently the difficult duties inseparably connected with their labors. Can an Association secure these necessary advantages by an election? If the representative selected have these qualifications, can he be secured? Again, a journal must be stationary; its books, records, library, correspondence, and the execution of the necessary work demand this. Is the editor to be selected always from that locality? Who can leave home and business to take charge for one year of a journal? Who would do this? A man of capacity could not be induced to abandon lucrative work at home; any other would entail ruin. If this difficulty could, however, be surmounted, what would be the result of a different editorial policy and management each year?

If the editor were permanently appointed at the place of publication, he would direct the work absolutely, if he were an editor of the least value, and if he did this, the publication would be his journal, and not the journal of the Association; his direction, course, and policy, would necessarily be unsatisfactory to the multitude placing him in control. If he were required to so manage as to issue only the papers of the Association, the journal would simply be a volume of Transactions; not in one volume, as is most convenient, but in twelve parts. It is to be hoped that such a Pandora's box will never be opened in the Association. Such a question would be a source of infinite mischief, and carry within itself more evil than did the classic wooden horse of the Greeks into the midst of the unsuspicious and ruined Trojans. The true plan is that suggested by Dr. Davis, of Chicago; a plan to be noticed in this paper.

The recommendation for creating, through the agency of Congress, a National Medical College, meets with no favor; or next to none. A scientific institution controlled by a political body could not enjoy the confidence of all of the Profession; the dominant faction would, in successive series of administrations, impress and control such a College, and all physicians whose political sympathies were in antagonism with the dominant political faction, would oppose the College and withdraw from it their support and influence; more than this, they would injure the institution by partisan action, or by unjustly promulgated expressions of suspicion and distrust. The whole subject has been carefully examined and justly condemned.

An excellent suggestion was that of establishing a Medical Congress composed of an equal number of delegates from each State; this Congress to have sole cognizance of all questions not of a strictly scientific character. Such a Body need not consist of more than two members from each State; these to be elected (not through a nominating committee, but by open nomination and ballot) by each State Medical Society, and sent as delegates to the Medical Congress or Senate. This Body would be small, compact, composed of gentlemen carefully selected for the

work, not restricted as to time (their expenses being paid by the State Medical Society) having opportunity for mature consideration and careful debate, and would command absolute confidence and authority. Its decisions would be of great moment, and of the utmost importance; they would be final. Their proceedings would be published in each medical journal, by request, and would be universally known and respected. This movement is of the highest importance. It embodies the germs of the final and satisfactory solution of the most perplexing and vital questions before the American Medical Profession. It is hoped and believed that at the next meeting of the Association the organization of this high Body will be carefully and promptly completed. It deserves the best and maturest consideration of the best and truest men in the Profession. While such a Body would efficiently control and dispose of the most perplexing and hitherto unmanageable issues, it would relieve the American Medical Association of all elements and causes of discord; it would exalt it, and this Body would thus become an organization solely and absolutely scientific; and as such it would command and wield an influence hitherto unknown and impossible. By all means this great movement should be carefully, promptly and harmoniously effected. The Association is, numerically, a very large body; its power is unwieldy and diffused; its representative system very lax and practically ill defined and uncircumscribed; the responsibility of delegates vague and unfelt. A Medical Senate would be a small Body; its power would be manageable and compact; its representative system simple, clearly defined and absolutely restricted; the responsibility of delegates would be unavoidable and constantly appreciated. One can readily understand that the first Body can exercise but small power and legislate with difficulty; while the last Body would be all powerful and legislate with ease and precision. The position of a medical senator would be one of high and great dignity; far above that of a United States senator (the latter being a political creation; the former the offspring of a scientific Body) as all must

admit; such positions would be sought by the best men in the medical ranks, and would be accorded with great care and circumspection. Such a Body would be a source of pride, power and influence; it would control, direct and give order, where there is practically now no control, and where order is needed and demanded. All good men in the Profession will welcome its creation, and give to it their fullest influence and support.

Dr. Keller, who brought forward the motion for the formation of such a Body, must devote himself now to this important work, and see that it be so perfected in all of its details as to need only a vote of the Association to give it vigorous existence and efficient power.

It will be seen that the report of the Committee on Medical Education involves subjects for serious consideration. Its honest and enthusiastic chairman has worked zealously and well.

The librarian, Dr. F. A. Askew reports encouragingly of this institution.

Dr. F. G. Smith as chairman (acting) of the Prize Committee, reports a singular omission on the part of contestants to comply with the requirements, thus having their papers necessarily ruled out of competition. But one prize was awarded. This was given to Dr. S. B. Percy. Those who are familiar with Dr. Percy and his writings will anticipate reading a valuable paper.

The chairman (Dr. T. Parvin, of Indiana,) of the Committee on Medical Literature, made, it is said, a very excellent report indeed. His recommendation to offer a prize of $600 every third year, instead of two prizes of $100 each every year, is good and judicious. Such a change would result in securing increased competition and a better literature.

Dr. W. Findley made a proper motion to have the matter of contracts satisfactorily or at least definitely settled. The Association was unequal to this work, as it always has been where legislation on the morale rather than the science of medicine is involved. The whole question was referred back to the State

societies. This virtually buries it, and emasculates any resulting action. Most State societies will do nothing, or if anything is done, there will be such an unavoidable dissimilarity of action as to destroy all hope of any fixed or uniform rule. Who, for instance, in West Virginia will feel any stigma attaching to himself for laxity or irregularity in this matter of making contracts, against the medical law of his State, if in adjoining States his action is legalized and sustained by the Profession. Some central authority must establish a uniform rule. State societies cannot do this; unavoidable differences of legislation will necessarily emasculate all established laws.

Dr. Woodward states that excellent progress is being made by the Surgeon-General in establishing a national medical library.

Much discussion and very necessary exchanges of opinion occurred in regard to the indiscriminate publishing of all papers referred to the Publishing Committee. This abuse makes the volume of Transactions unwieldy and almost valueless; one has to examine masses of literary chaff to secure a very few kernels of scientific grain. Dr. N. S. Davis has solved the problem. His plan is efficient and unexceptionable. It will be found on page 764 of this Journal. It deserves close attention.

The legislation in regard to diminishing the danger of poisoning from unguarded bottles of poison, and the affixing upon each peculiarly made bottle containing poison a label giving the proper antidote, is worthy of commendation; so also is the legislation in regard to tracing out the causes in virtue of which diseases affecting the lower animals are propagated to man, and preventing such propagation.

The resolution of the Association recommending communities to discourage the use of ardent spirits is, to say the least, remarkable. The only act approaching it in absurdity is Æsop's convention of frogs resolving that they had as much rain as they desired, and discouraging the appearance of any more. Dr. Frederick Horner, the originator of the resolution, is certainly an enthusiastic philanthropist, and has a warm heart, if not a strong brain. His resolution may have been intended as

a satire upon the legislation of the Association, but it bears the evidence of sincerity as well as of simplicity upon the part of its author. It would make a good paragraph in the history of Utopia.

The Profession will be glad to learn that they are to have the privilege of at least examining the nomenclature recommended by the committee upon that subject, before being asked to adopt it. Such a report requires close criticism before a vote is taken in regard to its adoption. Dr. Woodward's action in regard to this matter was timely and judicious.

The officers elected command the esteem and respect of the Profession. This is as it should be; and it is to be hoped that the Association will never again imperil its existence by injudicious and reckless legislation upon this subject. The meeting next year at St. Louis will do much to strengthen the Association. The able and accomplished physicians of that city, and of the great West, will give it renewed vigor; and the great South will make an outpouring of its medical power and influence.

The support given to the Massachusetts Medical Society was timely, just, and generous. It needed such aid, and will derive much benefit from it.

The legislation in regard to the irregularities in the District of Columbia; the expulsion of the authors of the disturbances; the exclusion of all delegates from medical colleges educating in mixed classes the negro and the white man; the denial of admission to women-rights medical women and their associate agitators is right, and will command just support. No one wishes to punish or thwart or injure these people. If they desire a Medical Association, they should organize one, but the right of companionship and affiliation is so undeniable that all must endorse the action of the American Medical Association in its practical expression; and the expression was certainly as practical as could be desired.

The memorial offering to Drs. Gerhard, Dickson, and Pitcher, will be valued by all who knew these distinguished and noble physicians.

One of the features of the Transactions which will attract attention, is the speech of Dr. Gross, calling upon the Association to repudiate the old and useless custom of publishing or making the hackneyed reports upon medical education, medical literature, and climatology, etc., etc. He very properly said that these reports have been and must be useless. The Association is powerless to effect any results for good in this direction. It has tried faithfully and honestly and persistently to do so, but its efforts have been all abortive and universally repudiated. It is useless for practical men to waste time or hope for aid, in looking to the Association for the efficient disposition of these questions. The Association has done better than it can ever do again in its efforts to solve these problems, and all that has been done is not only valueless and worthless, but its work has been injurious in the unavoidable wasting of precious years during the struggle; allowing the Profession to drift like a rudderless vessel uncontrolled and without a master; while so much of the summer has passed and nothing of fruit or harvest is yet ready for the professional garner. The great soil, the American profession, is strong and fertile beyond description, but the workmen have been insufficient and unable to stir it; to call forth its latent wealth. New forces are needed. As Dr. Gross has well said, it is time for those who have vainly tried to desist. A system radically different is necessary. This new and efficient force is now prospectively before the Profession in its limited and powerful representative and responsible Senate. There is too a vast power which has not yet been tried. It is a sleeping giant; the Press. Almost every medical press is not only asleep, but most of them think it wrong to be awakened for such work. They have not, say they, anything to do with the morale, the character of the Medical Profession; they are to work only in behalf of medical science, and leave its representatives to dispose, as best they may, of the vital problems which imperil its character; which retard its growth; which destroy its honor and cloud its distinction. Much of the press is anxious to leave profitably untouched the examination

and direction of forces which unexamined and undirected obliterate the precious distinction between physicians and institutions of high character, unblemished reputation, and unstained honor, and those physicians and institutions that are plausible tricksters, palpable charlatans, and habitual representatives of base methods which destroy public confidence in the character and reputation of medical men. It is necessary for the press to labor for the science of medicine, but who can question the greater necessity of its laboring for that which is far more important, the reputation and character of the Medical Profession? Some silly persons attribute any action on the part of the press in criticising medical institutions, medical authors, or medical officers, to ill feeling, to envy, jealousy, and those baser motives which most probably often inspire their own actions; but those who control the medical press would be even more silly than these suspicious carpers, if they could, for an instant, be influenced by them. It is profitable to avoid these subjects; but is it right? Should not the Profession demand such labor of its press? The press then, if the Association repudiates, as Dr. Gross has suggested, all further useless labor in behalf of medical literature and medical education, etc., is all-powerful in grasping this subject. The grasp, however, must be made not by editors, but by the powerful, omnipotent hand of the Profession. That resources, excellent methods, efficient forces, successful means for meeting triumphantly these great questions are latent, surely and beyond peradventure, in the great mind of the Medical Profession of this country, no one doubts. This mind must have a proper field in which to do its great work; the gates of a field boundless in resources and power, the modern press, must be thrown open to this great army, and great work will assuredly be done. Scientific papers are all well enough, but the Profession must work to sustain its character and reputation, as well as its science. It alone can do this great work, but it can do it only through the Medical Press. This fact is unquestionable. Such papers must be written. The problems must be solved. Bring

forward the suggestions; devise the means; set forth the methods. Place the best of these, through the press, before the medical world. The seed will soon germinate. Journals thus sent forth will disseminate varied ideas, provoking general discussion, and eliciting valuable conclusions. These will go through the State Medical Societies, and by their representatives, to that future medical power, the Medical Senate, for analysis, formation, utility, and force. While scientific papers are sent to medical journals, medical men are invited and respectfully enjoined to send to this Journal, at least, carefully-prepared papers in regard to questions fully as important and necessary; questions affecting the character and honor of their profession.

The proposition to reward the fidelity and efficiency of the Permanent Secretary, Dr. W. B. Atkinson, of Philadelphia, in the discharge of the difficult and arduous duties devolving upon the Permanent Secretary, was well conceived. It is pleasing to know that the Association acted promptly and justly in this matter. The reward was well deserved.

Of the President's address, it is difficult to write. The relations of this Journal to the speaker, during the past year, have been such, that all criticism may be attributed to prejudice and an inability to write justly and impartially. With a full appreciation of this fact, and that even the most generous review may be thus emasculated from the reasons specified, a brief notice will yet be given. The speech was such that a medical journal can not, with justice to the Profession, remain wholly silent in regard to it, and any possible or anticipated distortion of the motives of a reviewer can never justify his tacit acceptance of officially enunciated opinions which deserves proper and public notice. This notice will, of course, be not only courteous but generous, and however much it may be misconstrued, it is only requested, that the criticisms made (irrespectively of the motives for making them) may receive due attention on the part of the reader.

The opening of this address is very appropriate and becom-

ing, and the speaker improved the opportunity of paying a just tribute to the many who now living or dead have made the city of Philadelphia the theatre of their labors and triumphs. The distinguished dead were specially noticed, and among these was Prof. Samuel Jackson, who had but recently passed away. No one can read this part of the address without a feeling of astonishment and regret, that no allusion is made to Professor Samuel Henry Dickson, whose recent death-bed was so near the Hall of the Association. A man whose personal character was so lovely and beyond reproach; whose professional distinction was so great that he was retained in a Philadelphia school as one of its chief pillars, though, throughout the civil war, his opinions were in direct antagonism with the greater part of all among whom he resided; an eloquent lecturer, a learned physician, a noble man; one would suppose that a Southern physician would have delighted to honor him in a Northern city; to do justice, at least, to one whose life, character, and entire record were such as to make him a source of pride and congratulation to all of his immediate countrymen. The omission to allude to this distinguished gentleman, and to drop at least one tribute flower where garlands were strewn so profusely in memory of those claiming a different latitude has attracted, very naturally, universal and severe comment.

The subject of medical education was next examined. The views of the speaker were the most remarkable on record. The Association was organized to elevate the standard of medical education, but for the first time in its history, and in direct antagonism with the object of its creation and its whole record, this speaker claimed, not that such a record was proper and just, but, on the contrary, that the whole efforts of the Medical Profession had been directed erroneously; that a course exactly the opposite of the one pursued and so universally respected, was the course which was proper and necessary. The speaker claimed that there was "too much learning" in the profession; that it was more necessary to know how to chop limbs than how to "chop logic."

He claimed that attention should be given to the art or practice, rather than to the science of medicine. Physicians were too scientific; learning was not so necessary as dexterity and familiarity with mechanical details. His views were advocated by illustration. Napoleon, it was claimed, spelled badly; the distinguished Dudley and Richardson had gained distinction without scholarship, etc., etc. Surely, no one can read such opinions without regret and astonishment. They are rank heresy against the history, genius, hope, and aspirations of medicine; and the arguments advanced to sustain them are so weak, that it seems inexcusable, apart from the time and place of their utterance, to dignify them with notice and easy refutation. In what avocation of life is there too much learning, the history of mankind being the jury or tribunal before which such an issue is made? When has such a jury ever given such a verdict, or when has such a tribunal ever enunciated such an edict? It is heresy, then, against universal as well as medical testimony. If Napoleon spelled badly, whether does this show the inutility of education, or the mastery of a master mind in triumphing over serious obstacles? Were all men like Napoleon (or Dudley, etc.,) they might attain similar results without the special scholarship, which the speaker denied to them, but how few have genius, and what additional triumphs will genius always accomplish if fortified by increased educational advantages? If great men accomplish great acts with inefficient means, is it possible to use such facts as arguments for demonstrating the inefficiency of better means?

If this be a rational argument for rational men, how natural the deduction that it is folly to strive after all improvements. Why should there be improved naval architecture, when Columbus discovered America in a Spanish "Tub?" What is the use of railroads, when mail-coaches and road-wagons transformed rude countries into civilized powers? Illustration however, is unlimited; its superabundance embarrasses the mind, and endless selections will be mentally made by every reader. The speaker gave, in evidence of the value of his argument,

the obscurity of Daniel Drake's great work, when contrasted with the notoriety of a practical and active practitioner. The illustration was most unfortunate; Drake, for his great learning and his great deeds, has been awarded medical immortality; placed alongside of the best bonesetter or bonesawer, he is loaded with laurels and honored, while the other is covered with fig leaves, and enjoined to conceal, in such company, his discreditable nakedness.

The claim that the thoroughness of the German medical system has induced a therapeutic nihilism is inexcusable; this operation is not only a libel on the German thoroughness of investigation (and thoroughness wherever this is instituted) but the statement is absolutely untrue; it evinces a recklessness or inaccuracy or ignorance or want of comprehension that is astonishing. It is repudiating the brilliancy and thoroughness of modern research, and counselling a return to the system of practice which obtained in the darkest ages of medicine; a system based solely upon bedside speculation and unscientific observation. It is offering a premium for mental laziness, and remitting the medical world to the horrors of tentation and empiricism. The German system and the better system of modern therapeutics do not even approximate nihilism, as is claimed. If the greatest German clinician, Niemeyer, is to be accepted as a fair specimen of a German therapeutical teacher, it will be found that his treatment is far more active than that of the Scotch, English, and American schools. General and local bleeding; the bold use of opium; the even rash use of the cold bath in idiopathic fevers; and the bold applications of ice in symptomatic fevers, etc., cannot be accepted as nihilism, or even an approach to it. If, however, medical science honestly and laboriously cultivated does in the future teach that nihilism best insures the comfort and safety of the patient, and thus most benefits the reputation of medicine, instead of censuring such nihilism, will it not then be the part of the soundest wisdom to eulogize and defend it? Would it not be better to be thus guided by science and reason than to be led by blind

guides over the old roads of heroic and fatal medication? This scandalous effort to repudiate severe study and enlightened scientific treatment, and to substitute for it the rash interference of uninformed clinical experimentation, must meet with prompt and just rebuke.

To express briefly the whole statement of the speaker, he claims that there is "too much learning in the Profession," and that attention should be given to the art or practice rather than to the science of medicine. The reply is so simple as scarcely to warrant its record. The art or practice of medicine is but the application of the principles of its science. To apply the principles in practice, the science must, logically, be first mastered. How can there be a harvest without the laborious planting of the seed? Apart from the inexcusable repudiation of the science of medicine on the part of the speaker, his argument is so much like a bubble, that upon the simplest thrust it collapses into absolute nothingness. It is just such reasoning in regard to engineering science which so constantly startles the American public and brings grief and desolation to so many of its firesides. Engineers who are taught only the art or practice of their business, and not its science, are placed in positions of great responsibility, when the first demonstration of such folly is a catastrophe that causes a shudder of horror and an outburst of indignation throughout the land. In the Westfield Horror, when the harbor of New York was strewn with the dying and scalded remnants of humanity, and when the whole nation was convulsed with blended feelings of anger and sympathy, what was the horrible fact revealed; that engineers on that line of steamers (and others) were given charge of human life though ignorant of the first principles of the science of their calling; they were yet practical adepts in its practice or art. Further illustration is useless; every one is cognizant of varied and better illustrations. If such folly meets with universal rebuke and indignation when the cargoes of boats are to be protected, how much more merited the rebuke, when the unhappy and helpless occupants of sick-beds are foolishly to be exposed to danger from simi-

lar causes? Such teaching is weak, dangerous, and inexcusable. It is stained with the levelling tendencies which are so welcome to the mob; which is so captivating to the ignorant and and illiterate; which degrades the science of medicine to the level of a physical avocation; which destroys its hopes; denies its claims; insults its history; and prostitutes its high calling. Such teaching deserves rebuke, and will surely receive it.

The exalted power of the science of medicine, its value, its progressiveness and increasing utility, form much of the pride and give very much of pleasure to its representatives. That its allurements are so great as perhaps to entice away its adherents from the useful application of their knowledge, is admitted; just as a farmer may be a scientific agricultural chemist, and so wedded to his studies as to make but lean harvests; but such arguments detract nothing from any science; they teach only the folly or enthusiasm or bad judgment of its representatives. There never was a greater heresy enunciated before a scientific Body, than that there is "too much learning in the medical profession." Pope taught that a little learning is a dangerous thing, but this more modern instructor would teach the opposite, that too much learning is the real source of the danger!! Who is right? While all will certainly prefer to cling to Pope, who is, it is claimed, the greater teacher, they will yet accord to his modern opponent the great merit of sincerity; for no one can doubt that he has practically observed the rules which he has recently and so earnestly recommended to others! The sincerity of his teaching is its only recommendation. In every other respect, the verdict will universally be in regard to this speech, that it was a melancholy and absolute failure.*

* Here ends public notice of a public officer and his public acts. Many have attributed all of these notices to bad motives. They are entitled to their opinions, but their opinions and themselves are to the writer insignificant. It is a matter of surprise, however, that these persons (entertaining for the reviewed that fellow-feeling which, as Coleridge affirms, makes us wondrous kind) have not been more astute and sensible. If a reviewer could so far

The Association has awakened a new interest, hope and trust in its future, and all will take pleasure in striving once more to make it an honor and pride to the American Medical Profession.

Close of Volume Thirteen.—This number, the largest that has ever been published, completes volume thirteen. The subscribers were entitled in this volume to six numbers of 112 pages each, making a volume of 672 pages. It will be seen that they have, instead of 672 pages, received 796 pages; more than one entire additional number of the Journal.

The "New York Medical Journal," extensively advertised as the largest medical monthly in America, furnishes, during the past six months, but 672 pages, or 124 pages less than are furnished in the "Richmond and Louisville Medical Journal;" indeed, this last Journal has really furnished a little more than seven whole numbers of 112 pages each for its last volume, while the "New York Medical Journal" furnishes but six numbers of 112 pages each. This fact is mentioned in no objectionable spirit, and certainly with no view of making unfavorable or invidious comparisons. It is stated because, for five years, it has been claimed that the "Richmond and Louisville Medical Journal" is the largest medical monthly in America, and when this claim is publicly questioned, it is believed that a plain and simple statement of the facts is imperative, and will therefore not be regarded as an evidence of bad or objectionable taste. The "New York Medical Journal" is a very superior work, indeed; it receives justly, and ought to receive, the confidence and support of the medical public. It would be impossible for the writer to draw any comparison, in point of merit, between his Journal and the New York Journal, or any other medical periodical; it would be impossible for him to publish a word, written or spoken, in its favor; such charlatanism is des-

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forget his self-respect as to stoop to envy, jealousy, or any unworthy feeling, in the declaration of his opinions, he ought to be accorded at least enough of judgment to envy a noble, rather than an ignoble record.—Ed.

picable; it is believed, however, to be right, under the circumstances, to vindicate a mercantile or commercial claim as to the size or volume of this work. The character of the contents has never been mentioned, and never will be. Constant effort is made to issue a Journal worthy of confidence, and this effort will be increased rather than diminished.

The course of the work has been such as to make for it many enemies, but it is pleasing to know that it has secured for it a very large number of warm and powerful friends. The course of the Journal will be as it has been. There will be an unrelaxing effort to secure the best material; to publish liberally in volume, matter, illustrations, and press-work; to try on all occasions to speak the truth, so far as it is known; to advocate the very best and highest interests of the Profession, without fear or favor; to be wholly independent of all personal or corporate bodies and interests, and to secure for the Journal (what it has, with its first number, aimed to secure) the confidence and respect of the independent and true men in the Medical Profession. Authors, writers, teachers, public acts, public officers, and public institutions will always be reviewed with the unchanging and unflagging desire to sustain what is true, reputable, and right, and to denounce, in the plainest language possible, all personal, professional, and corporate bodies staining the character or record of the Medical Profession.

The Journal commenced this volume with an issue of a little more than 1,200 numbers; it commences the next volume with an issue of 1,450. Grateful for past and present support, and with no other capital than an unbroken and impregnable confidence in the good faith and just dealing of his medical brethren, the editor begins the fourteeth volume; hoping and expecting to make material improvements in the Journal, and asking its friends to continue doing zealously, in the future, what they have so generously done in the past; to aid and strengthen the Journal with their pen and influence, and to secure for it among their friends an increased circulation and faithful support.

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